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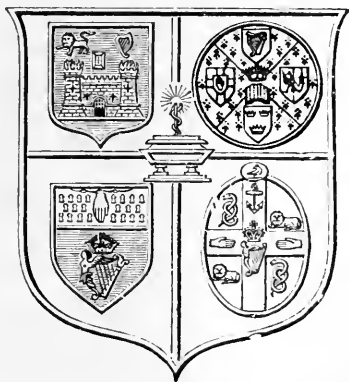
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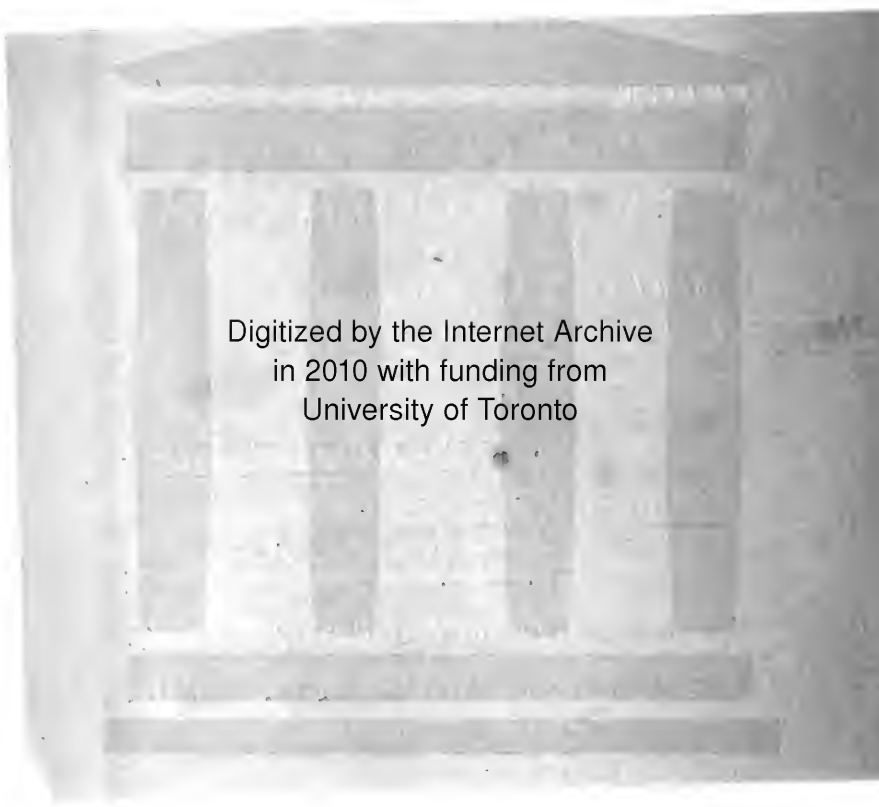
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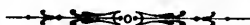
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School of Medicine of the Catholic University of Ireland,

CECILIA STREET, DUBLIN.

SESSION 1897-8. { WINTER LECTURES commence NOVEMBER 2nd.
 { SUMMER LECTURES commence APRIL 1st.

TEACHING STAFF:

Anatomy—A. Birmingham, M.D.
Physiology { Charles Coppinger, M.D.
 { Denis Coffey, M.B.
Chemistry—John Campbell, M.D., assisted
 by J. P. Frengley, M.B.
Surgery—Patrick J. Hayes, M.D., M.Ch.
Medicine—Sir Christopher Nixon, M.D.
Physics—J. H. Stewart, B.Sc.
Ophthalmology—Louis Werner, M.B.
Operative { P. J. Hayes, M.Ch., and
Surgery { J. C. M'Ardle, F.R.C.S.I.
Midwifery—Alfred Smith, M.B., M.A.O.

Materia Medica { F. J. B. Quinlan, M.D.
and Pharmacy {
Med. Jurisprudence { Antony Roche,
and Hygiene { M.R.C.P.I.
Pathology and { Edmond J. M'Weeney,
Bacteriology { M.A., M.D.
Biology { George Sigerson, M.D.
 { A. J. Blaney, M.A., M.B.
Sanitary Science { Antony Roche,
 { M.R.C.P.I.
Anatomical Demon- { Drs. Fagan,
strators { Dempsey &c.

EXHIBITIONS, &c.—Two, value £10 each; Four, value £12 10s. each; Two Large Gold and several Silver Medals. **BEGINNERS** should be at the School not later than October 12th, if possible; on that date the **INTRODUCTORY COURSE** commences. It is specially designed to simplify matters for those who have never worked at Medicine before. It is free to all Students of the School, and should be attended from the first day. **SCHOOL IMPROVEMENTS.**—The School buildings have been almost doubled in size. The following are entirely new:—Dissecting Room, Bone and Reading Room, Professors' Laboratory, Histology Laboratory, Physiology Laboratory, Bacteriology Laboratory, Chemistry Laboratory, Preparation and Store Rooms, and a Public Health Laboratory. Any of the School Courses may be attended by Students of other Schools. Students are prepared for all the Examining Bodies in the United Kingdom. Further particulars, and a Guide giving all information required by those commencing the study of Medicine, may be had on application to THE REGISTRAR, MEDICAL SCHOOL, CECILIA STREET, DUBLIN.

St. Mark's Ophthalmic Hospital,

LINCOLN-PLACE, DUBLIN.

SURGEONS.

JOHN B. STORY, M.B., M.Ch., T.C.D., F.R.C.S.I., Examiner in Ophthalmic Surgery to the Royal College of Surgeons, Ireland; Professor of Ophthalmic and Aural Surgery, Royal College of Surgeons; Ophthalmic and Aural Surgeon, Steevens' Hospital; Hon. Oculist and Aurist, Claremont Institution for Deaf and Dumb, and St. Joseph's Male Blind Asylum, Drumcondra.

ARTHUR H. BENSON, M.A., M.B., T.C.D., F.R.C.S.I., Ophthalmic and Aural Surgeon, City of Dublin Hospital; Ex-University Examiner in Ophthalmic Surgery, T.C.D.

ASSISTANT SURGEONS.

FERDINAND ODEVAINE, F.R.C.S.I., Brigade Surgeon (retired), Ophthalmic and Aural Surgeon, St. Vincent's Hospital.

ROBERT J. MONTGOMERY, M.B., B.Ch., Univ. Dub., F.R.C.S.I., Ophthalmic and Aural Surgeon, Drumcondra Hospital.

RESIDENT SURGEON.

FRANK CHETWODE CRAWLEY, M.B., B.Ch., B.A.O., T.C.D.

THIS Hospital is the largest of its kind in Ireland, and, owing to recent additions, now has, 50 beds. During the past year nearly 900 operations were performed in the Hospital.

The Surgeon on duty attends from 9 till 12 daily.

Clinical Lectures are delivered at 11 o'clock on Mondays, Tuesdays, Thursdays, and Fridays.

Operations are performed on Wednesdays and Saturdays at 11 o'clock.

Fee for Three Months' attendance, £3 3s. Special Classes for instruction in the use of the Ophthalmoscope and the performance of Ophthalmic Operations are held during the Session.

For further particulars apply to Mr. STORY, 6 Merrion-square; or Mr. ARTHUR BENSON, 42 Fitzwilliam-square, Dublin.

RICHMOND, WHITWORTH, & HARDWICKE HOSPITALS, NORTH BRUNSWICK-STREET, DUBLIN.

SESSION 1897-8.

Physicians:

- SIR JOHN BANKS, K.C.B., M.D., LL.D.: Physician-in-Ordinary to the Queen in Ireland; *Regius* Professor of Medicine, Univ. Dub.; Ex-President, College of Physicians; Member of the Senate of the Royal University of Ireland; Ex-President of the Academy of Medicine in Ireland, and of the British Medical Association.
- S. GORDON, M.D.; Ex-President, College of Physicians; Ex-President of the Royal Academy of Medicine in Ireland; Physician to Swift's Hospital for Lunatics.
- JOSEPH O'CARROLL, M.D., F.R.C.P.; Physician to the Children's Hospital, Temple-street; Examiner in Medicine, Royal University; Physician, National Hospital for Consumption; Member of the Governing Body Catholic University Medical School.
- JAMES B. COLEMAN, M.B., B.Ch.; Physician, Children's Hospital; late Physician, Jervis-street Hospital.

Assistant Physician:

R. TRAVERS SMITH, M.D., Univ. Dublin.

Surgeons:

- SIR WILLIAM THOMSON, M.D., Ch.M.; President, Royal College of Surgeons; Member of the Senate of the Royal University in Ireland; Direct Representative for Ireland, General Medical Council; Surgeon-in-Ordinary to His Excellency the Lord Lieutenant.
- SIR THOMLEY STOKER, M.D.; Fellow and Examiner in Surgery, Royal University; Surgeon to Swift's Hospital for Lunatics.
- THOMAS MYLES, M.D., F.R.C.S.; late Professor of Pathology and Examiner, Royal College of Surgeons; late Surgeon to Jervis-street Hospital; Member of Council Royal College of Surgeons.

Ophthalmic Surgeon:

- ARCHIBALD JACOB, M.D., F.R.C.S.; Professor of Ophthalmic Surgery in the Royal College of Surgeons, Ireland; Ophthalmic Surgeon to His Excellency the Lord Lieutenant.

Throat Surgeon:

- ROBERT H. WOODS, M.B., B.Ch.; Fellow and Secretary to the Council, Royal College of Surgeons.

Gynæcologist:

- E. WINIFRED DICKSON, M.D., B.Ch., F.R.C.S.; late Travelling Scholar, Royal University; Assistant Master, Coombe Lying-in Hospital.

Pathologist and Bacteriologist:

- A. C. O'SULLIVAN, M.A., M.B.; Fellow of Trinity College, Dublin; Professor of Pathology, Trinity College.

Consulting Ophthalmic Surgeon:

- C. E. FITZGERALD, M.D., F.R.C.P.; Oculist to the Queen in Ireland.

Assistant Surgeons:

- ROBERT J. HARVEY, L.R.C.P. and L.R.C.S.
WM. H. LANGLEY, L.R.C.P. and L.R.C.S.

Resident Physician:

- ALEX. N. MCKELVEY, L.R.C.P. and L.R.C.S.

Resident Surgeon:

- LEWIS ROBINSON, M.B., B.Ch., Royal University.

The Course of Clinical Instruction will commence on Friday, OCTOBER 1st, 1897.

For Prospectuses apply to Sir William Thomson, F.R.C.S., Treasurer, 54 STEPHEN'S GREEN, EAST; or to Joseph O'Carroll, M.A., Hon. Sec., 27 WESLAND ROW, DUBLIN.

CITY OF DUBLIN HOSPITAL, UPPER BAGGOT-STREET.

SESSION 1897-98.

Founded 1832. Rebuilt and considerably Enlarged, 1893.

CONSULTING PHYSICIANS:—**Sir John T. Banks**, K.C.B., M.D.; Regius Professor of Physic, Univ. Dublin; Physician-in-Ordinary to the Queen in Ireland; Past-President of the Royal College of Physicians, and of the Royal Academy of Medicine in Ireland.

J. Hawtrey Benson, M.D., Univ. Dublin; F.R.C.P.I., &c.; Late Visiting Physician to the City of Dublin Hospital; Consulting Physician for Ireland to Her Majesty's Colonial Office; Consulting Physician to Monkstown Hospital.

PHYSICIANS:—**Sir George F. Duffey**, M.D., Univ. Dublin; President of the Royal College of Physicians in Ireland; Professor of Materia Medica, and Professor of Pharmacy, R.C.S.I.; Visitor for H. M. Privy Council of the Examinations of the Pharmaceutical Society of Ireland; Consulting Physician to the National Institution for the Blind of Ireland.

Alfred R. Parsons, M.D., Univ. Dublin; F.R.C.P.I.; Diplomate in State Medicine; ex-Medical Scholar and Medical Travelling Prizeman, University of Dublin; Physician to the National Hospital for Consumption.

SURGEONS:—**Henry Gray Croly**, F.R.C.S., M.R.C.P.; Member of Council and Past-President of the Royal College of Surgeons; Past-President of the Surgical Section of the Royal Academy of Medicine; Consulting Surgeon to the Monkstown Hospital, and to the Boys' Masonic Orphan School; Past-President of the Irish Medical Association; for many years Member of the Court of Surgical Examiners, and Examiner in Anatomy, Surgery, and Operative Surgery, Royal College of Surgeons.

W. I. de Courcy Wheeler, F.R.C.S., B.A., M.D., M.Ch., Univ. Dublin; M.R.C.P.; Member of Council and Past President, R.C.S.I.; Fellow, Past-President, and Member of Council of the Surgical Section of the Royal Academy of Medicine; formerly Member of Surgical Court of Examiners, and Examiner in Surgery and Operative Surgery, Royal College of Surgeons; Consulting Surgeon to the National Institution for the Blind of Ireland.

G. Jameson Johnston, M.A., M.B., B.Ch., Royal Univ. of Ireland; Demonstrator of Anatomy, Trinity College, Dublin; late Assistant Surgeon, Richmond Hospital.

OPHTHALMIC AND AURAL SURGEON:—**Arthur H. Benson**, M.A., M.B., Univ. Dublin; Fellow and Member of Council, Royal College of Surgeons; Surgeon to St Mark's Ophthalmic Hospital; late University Examiner in Ophthalmology, Trinity College, Dublin; and Examiner in Ophthalmic and Aural Surgery, Conjoint Examinations, R.C.S. & R.C.P., Ireland.

GYNÆCOLOGIST:—**John Lilly Lane**, A.B., Univ. Dublin; L.R.C.S.I.; L. and L.M., R.C.P.I.; Ex-Assistant Physician, Rotunda Hospital; Maternity Physician, Stevens' Hospital; Fellow and Member of Council, Obstetrical Section, Royal Academy of Medicine.

RESIDENT SURGEON:—**Arthur C. Duffey**, M.B., B.Ch., B.A.O., Univ. Dublin; L.R.C.P.I.; L.M., Rotunda Hospital.

THE arrangements of this Hospital offer Pupils an opportunity of observing disease in every form; and since its enlargement and rebuilding many important additional facilities for Students have been provided. At the morning visit, which commences at Nine o'clock daily, the nature, treatment, and progress of the cases are explained at the bedside of the patient. Medical and Surgical Lectures are delivered in the Theatre on special cases, and Pathological specimens are exhibited. Surgical operations are performed on Tuesdays, Thursdays, and Saturdays, at 10 a.m., except in cases of emergency. An entirely new Operating Theatre is being constructed in accordance with the most modern surgical requirements and is now almost completed.

The **DRUMMOND BUILDING**, for Fevers and Infectious Diseases, affords full opportunity for studying these important branches of Medicine, and is visited each morning by the physician on duty.

There are Special Wards for Ophthalmic and Aural cases, under the care of Mr. **ARTHUR BENSON**, who delivers a Course of Clinical Lectures on Diseases of the Eye and Ear; and a Ward for Diseases of Women, under the care of Dr. **LANE**, who gives Clinical Instruction on Diseases peculiar to Women. There is also a Ward exclusively for Children.

Connected with the Hospital is a largely-attended Daily Dispensary, at which the Pupils are allowed to perform minor operations under the guidance of the Surgeons, and are rendered familiar with the details of Dispensary Management and the art of prescribing. There are Special Dispensaries for Diseases of the Eye and Ear, of the Skin, and of the Throat, and also for Diseases peculiar to Women, at each of which Practical Instruction is given.

Dressers to the Surgeons and Clinical Clerks to the Physicians are appointed, and Certificates awarded for the satisfactory performance of their duties.

A salaried Resident Surgeon is appointed annually. Six Surgical and four Medical Resident Pupils are appointed annually, and each Pupil holds office for Six Months. Special Certificates are awarded if merited.

A Gold Medal—presented by Mr. **WHEELER**—is awarded annually. The Examination is alternately in Medicine and in Surgery.

The **WINTER SESSION** commences 1st OCTOBER and terminates on MARCH 31. The **SUMMER SESSION** commences on APRIL 1, and terminates on JUNE 30.

FEES.—Nine Months' Hospital Attendance, £12 12s.; Six Months, £8 8s.; Three Months, £5 5s. Certificates of Attendance are recognised by all the Universities, Colleges, and Halls, and by the Army, Navy, and other Examining Boards. For further particulars apply to Mr. **G. JAMESON JOHNSTON**, M.B., Hon. Sec. Medical Board, 13 Lower Fitzwilliam-street; or at the Hospital, Upper Baggot-street, between 10 and 11 o'clock, a.m.

MATER MISERICORDIÆ HOSPITAL.

338 BEDS.

MEDICAL STAFF.

Consulting Physician:

SIR FRANCIS H. CRUISE, A.B., M.D.,
Univ. Dub., F.R.C.P.

Physicians:

SIR CHRISTOPHER NIXON, A.B., M.B.,
LL.D., Univ. Dub.; M.D., Hon. Causa,
R.U.I.; F.R.C.P., L.R.C.S.

JOSEPH REDMOND, M.D., F.R.C.P.,
L.R.C.S., L.M.

MICHAEL A. BOYD, M.D., F.R.C.P.,
L.R.C.S., L.M.

JOHN MURPHY, F.R.C.P., L.R.C.S., L.M.

Assistant Physician:

MARTIN DEMPSEY, B.A., M.D., R.U.,
M.R.C.P.

Obstetric Physician:

THOMAS MORE MADDEN, M.D.,
F.R.C.S.E., M.R.C.P., M.R.C.S.

Pathologist:

EDMOND J. McWEENEY, M.A., M.D.,
M.Ch., M.A.O., R.U.I.

Medical Registrar:

JOHN O'DONNELL, M.B., B.Ch., B.A.O.,
R.U.I.

House Physician:

JOSEPH F. WHELAN, M.B., B.Ch., B.A.O.,
R.U.I.

SURGICAL STAFF.

Surgeons:

PATRICK HAYES, F.R.C.S.E., M.D.,
M.Ch., Hon. Causa, R.U.I.

CHARLES COPPINGER, F.R.C.S., M.D.,
M.Ch., Hon. Causa, R.U.I., M.R.C.P.

ARTHUR CHANCE, F.R.C.S., L.R.C.P.,
&c.

JOHN LENTAIGNE, B.A., F.R.C.S.,
L.R.C.P., &c.

Assistant Surgeon:

ALEXANDER BLATNEY, M.A., M.B.,
B.Ch., B.A.O., R.U.I.

Ophthalmic Surgeon:

LOUIS WERNER, M.B., B.Ch., Univ. Dub.

Dental Surgeon:

DANIEL CORBETT, jun., A.B., Univ. Dub.,
F.R.C.S.

Surgical Registrar & Anæsthetist:
MICHAEL O'SULLIVAN, M.B., B.Ch.,
B.A.O., R.U.I.

House Surgeons:

MATTHEW MITCHELL, L.R.C.S., L. and
L.M.R.C.P.

THOMAS B. KERR, B.A., M.B., B.Ch.,
Univ. Dub.

PATRICK J. HAMILTON, M.B., B.Ch.,
B.A.O., R.U.I.

WALTER V. COPPINGER, M.B., B.Ch.,
Univ. Dub.

TIME TABLE.

		Clinical Teaching	Operations	Junior Teaching	Dispensaries	Special Practice
Monday	9 a.m.	{ Mr. Coppinger† or Mr. Lentaigne* Sir C. Nixon† or Dr. Boyd* }	—	—	Surgical	—
"	10 "	—	—	Dr. Dempsey	—	—
"	11 "	—	—	—	—	Dr. More Madden
Tuesday,	9 "	Dr. Redmond	—	—	Medical	—
"	10 "	{ Mr. Hayes† or Mr. Chance. }	—	Mr. Blatney	—	—
"	11 "	Mr. Lentaigne	—	—	—	Mr. Werner
Wednesday,	9 "	Dr. Boyd	Mr. Chance	Dr. Dempsey	Surgical	—
"	10 "	—	—	—	—	—
"	11 "	—	—	—	—	Dr. O'Donnell
Thursday,	9 "	{ Dr. Redmond* or Dr. Murphy† Mr. Hayes† or Mr. Chance* }	—	—	Medical	—
"	10 "	Mr. Chance†	—	Mr. Blatney	—	Mr. Werner (Operations)
Friday,	9 "	Mr. Chance*	Mr. Hayes	—	—	—
"	10 "	Sir C. Nixon	Mr. Lentaigne	Dr. Dempsey	Surgical	—
"	11 "	—	—	—	—	Dr. More Madden
Saturday,	9 "	Dr. Murphy	—	—	Medical	—
"	10 "	Mr. Coppinger	—	Mr. Blatney	—	Dr. McWeeney
"	11 "	—	Mr. Coppinger	—	—	Mr. Werner

* October, December, February, April, June.

† November, January, March, May.

JUNIOR INSTRUCTION.—A special course of instruction in Medicine and Surgery, introductory to clinical study, will be given during both Winter and Summer Sessions.

Entries can be made with any of the Physicians or Surgeons, or with the Registrar, A. CHANCE, F.R.C.S., 90 Merrion-square, either at the Hospital or between 2 and 4 p.m. at his residence. Certificates of Attendance will be issued only by the Registrar.

A Prospectus, containing in detail the arrangements for Clinical Instruction, Prizes, &c., may be obtained from the Secretary, Medical Board.

JOSEPH REDMOND, M.D., 8 CLARE-STREET.

Rotunda Lying-in Hospital, DUBLIN.

MASTER:

R. D. PUREFOY, M.D., T.C.D., F.R.C.S.

CONSULTING PHYSICIAN—JAMES LITTLE, M.D., F.K.Q.C.P.

CONSULTING } SIR PHILIP SMYLY, M.D., F.R.C.S.I., Surgeon to the Queen in
SURGEON } Ireland.

ASSISTANT PHYSICIANS { H. JELLETT, B.A., M.D., B.Ch., B.A.O., L.M. Rotunda
Hospital.
{ R. P. R. LYLE, M.D., T.C.D.

EXTERN MATERNITY ASSISTANTS { P. CARTON, M.D.
{ R. PURSER, M.B.

THIS INSTITUTION, the largest Lying-in Hospital in the United Kingdom, consists of two distinct Hospitals—namely, the Lying-in Hospital, into which 1,570 Labour Cases are on an average admitted annually, and the Auxiliary Hospital, set apart for the reception and treatment of patients suffering from the various Diseases Peculiar to Women; about 500 patients are received into this Hospital during each year.

There is also in connection with this Hospital a large Extern Maternity (2,061 patients were in the past year attended at their own homes), and a Dispensary for Diseases Peculiar to Women, which is open daily.

Pupils are admitted to the practice of all these departments.

Clinical Instruction in Midwifery and the Diseases of Women is given daily, and Classes free to all Pupils of the Hospital are regularly held.

Accommodation is provided for a limited number of Intern Pupils.

Pupils can enter at any time.

TERMS OF ATTENDANCE.

<i>Intern Pupils.</i>				<i>Extern Pupils.</i>			
For Six Months,	..	..	£21 0 0	For Six Months,	..	..	£10 10 0
„ Three Months,	..	..	12 12 0	„ Three Months,	..	..	6 6 0
„ Two Months,	..	..	9 9 0				
„ One Month,	..	..	6 6 0				

Each month after the first, if registered separately, £4 4s.

Lady Students are charged Intern Pupils' fees.

Probationers are trained as Nursetenders and Midwives on the following terms:—

Six Months Training (including Board and Lodging), 25 Guineas.

Application to be made to the Master or Assistant Physicians, at the Hospital, Great Britain-street.

THE ADELAIDE HOSPITAL,

PETER STREET, DUBLIN.

1897.

PHYSICIANS:

JAMES LITTLE, M.D., Univ. Edin., and Univ. Dub (*Hon. Causd*); Past-Pres. Royal Coll. Phys.; President of Royal Academy of Medicine, Ireland; Consulting Physician to Dr. Steevens', the Rotunda, the Children's, and St. Mark's Ophthalmic Hospitals; formerly Professor of the Practice of Medicine, R.C.S.I.

WALLACE BEATTY, M.D.; Vice-President and Censor, R.C.P.I.

HENRY T. BEWLEY, M.D., F.R.C.P.I.; Lecturer on Medical Jurisprudence and Hygiene, University of Dublin; Visiting Physician Bloomfield Lunatic Asylum.

SURGEONS:

FRANCIS T. HEUSTON, M.D., M.Ch., F.R.C.S.I.; Member of Council, and Ex-Professor of Anatomy, R.C.S.I.; Consulting Surgeon to the Coombe Lying-in Hospital, the Cripples' Home, Bray, and the Children's Home, Delgany.

JOHN HARRISON SCOTT, M.B., B.Ch.; F.R.C.S.I.; Medical Officer Guinness' Brewery.

T. E. GORDON, M.B., B.Ch., F.R.C.S.I.; Demonstrator of Anatomy, School of Physic, University, Dublin.

GYNÆCOLOGIST:

W. J. SMYLY, M.D., F.R.C.P.I.; Late Master of the Rotunda Hospital.

OPHTHALMIC SURGEON:

H. R. SWANZY, M.A., M.B., F.R.C.S.I.; Member of Council R.C.S.I.; Surgeon National Eye and Ear Infirmary, Dublin.

DENTAL SURGEON:

R. THEODORE STACK, M.D., F.R.C.S.I.; Surgeon to the Dental Hospital of Ireland.

PATHOLOGIST:

J. ALFRED SCOTT, M.D., F.R.C.S.I.; Professor of Physiology, Royal College of Surgeons, Ireland.

MEDICAL AND SURGICAL REGISTRAR:

GEORGE PEACOCKE, M.D., B.Ch.

HOUSE SURGEON:

K. E. GUNN, M.B., B.Ch.

ANÆSTHETIST:

PAUL A. PIEL, L.R.C.S.I., L.R.C.P.I., F.I.C.; Demonstrator of Histology, Royal College of Surgeons.

Operations at 10 o'clock on Tuesday, Thursday, and Saturday. There are Special Wards for Diseases peculiar to Women, Infants, and Children, and a large detached Fever Hospital.

EXTERN DEPARTMENT:

The Dispensaries at 10 a.m. afford special facilities for the study of Cutaneous Diseases, Diseases Peculiar to Women, Medicine and Surgery. Monday, Dr. Bewley; Wednesday, Dr. Smyly; Thursday, Dr. Beatty; Friday, Mr. Gordon; Saturday, Dr. Smyly.

A House Surgeon is elected yearly. Three Resident Pupils are elected half-yearly from amongst the students attending the hospital. The Certificates of Attendance are recognised by all the Universities, Colleges, and Licensing Bodies in the United Kingdom.

HUDSON SCHOLARSHIP.

THE HUDSON SCHOLARSHIP, £30 and a Gold Medal, and the HUDSON PRIZE of £10 and a Silver Medal, are awarded at the end of the Session for proficiency in Clinical Medicine and Medical Pathology; Clinical Surgery and Surgical Pathology; Surgical Appliances, including Instruments and Bandaging; Ophthalmology and Gynaecology.

PRIZES in Medicine, Surgery, and Dermatology are also awarded at the termination of the Session.

Fee for Nine Months' Hospital Attendance, £12 12s.; for Six Months, £8 8s.; for Summer Three Months, £5 5s.

Students wishing to join the Hospital can give their names to Mr. HEUSTON, 15 St. Stephen's-green, N., or to any other Member of the Medical Staff.

National Eye and Ear Infirmary.

(FOUNDED A.D. 1814.)

MOLESWORTH-STREET, DUBLIN.

Surgeons :

H. R. SWANZY, A.M., M.B., F.R.C.S.I. ; Examiner in Ophthalmology, University of Dublin ; Ophthalmic Surgeon, Adelaide Hospital.

C. E. FITZGERALD, M.D., M.Ch., F.R.C.P.I. ; Professor of Ophthalmic Surgery, Royal College of Surgeons ; Surgeon Oculist-in-Ordinary to the Queen in Ireland.

Assistant Surgeons :

P. W. MAXWELL, M.D., C.M. Edin., F.R.C.S.I. ; Ophthalmic Surgeon, Jervis-street Hospital ; Examiner in Ophthalmic Surgery, Royal Colleges of Physicians and Surgeons in Ireland.

LOUIS WERNER, M.B., M.Ch. ; Ophthalmic Surgeon, Mater Misericordiæ Hospital, Examiner in Ophthalmic Surgery to the Royal University in Ireland.

Physician to the Throat Dispensary :

RICHARD A. HAYES, M.D., Physician to Dr. Steevens' Hospital.

THIS Hospital is now amalgamated with St. Mark's Ophthalmic Hospital, under the name of the Royal Victoria Eye and Ear Hospital, and both under the management of one Council, but for the treatment of patients and for clinical teaching the two hospitals will, for the present, be conducted as hitherto.

This hospital contains 30 beds for the Treatment of Eye Disease. The Out-Patient Department and Ophthalmoscope Room have been newly erected upon approved principles. Operations are performed daily at 12 o'clock. Clinical Instruction in Diseases of the Eye, including a systematic Course of Lectures, is given daily by the Surgeons at 11 a.m. Instruction in Diseases of the Ear is given at 10 a.m.

The Certificate of a 'Three Months' Course at this Hospital is recognised by the Licensing Bodies.

Fee for a Three Months' Course, with or without Certificate, £3 3s.

Practical Afternoon Classes for teaching the use of the Ophthalmoscope, &c., are formed from time to time by the Assistant Surgeons.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

LICENCES IN MEDICINE AND MIDWIFERY.

EXAMINATIONS for the LICENCES in MEDICINE and MIDWIFERY of the COLLEGE are held in the Week following the First Friday in the months of February, May, and November. The Regulations may be obtained on application to the Registrar.

N.B.—Registered Medical Practitioners possessing one or more medical qualifications for a period of five years will be exempted from the Written portion of the Examination for the Licence in Midwifery.

Fee for the License in Medicine, FIFTEEN GUINEAS, except in the case of Graduates both in Arts and Medicine of any University in the United Kingdom, in which case the Fee is FIVE GUINEAS. Fee for the Licence in Midwifery, THREE GUINEAS. Fee for both Licences, if taken at the same time, SIXTEEN GUINEAS (to be lodged in one sum). Fee for a Special Examination in Medicine, TWENTY GUINEAS ; for a Special Examination in Midwifery, FIVE GUINEAS.

MEMBERSHIP.

Examinations for the MEMBERSHIP are held quarterly—in January, April, July, and October.

Licentiates in Medicine of the College alone are eligible.

Fee—TWENTY GUINEAS ; but to Graduates in Arts and Medicine of a University in the United Kingdom, FIFTEEN GUINEAS.

FELLOWSHIP.

Candidates for the FELLOWSHIP must be Members of the College of one year's standing, and must be proposed in January or July.

DIPLOMA IN STATE MEDICINE.

Stated Examinations for the DIPLOMA in STATE MEDICINE are held in conjunction with the Royal College of Surgeons in Ireland, on the Tuesday, Wednesday, and Thursday following the first Friday of the months of February, May, and November.

The Fee is TEN GUINEAS, or in the case of a Special Examination, FIFTEEN GUINEAS.

CONJOINT EXAMINATIONS.

Candidates for the CONJOINT EXAMINATIONS in MEDICINE, SURGERY, and MIDWIFERY, held in conformity with the Medical Act, 1886, by the Royal Colleges of Physicians and Surgeons of Ireland, will obtain full information on application to the Secretary of the Committee of Management, 6 Kildare-street, Dublin.

JAMES CRAIG, M.D., Univ. Dub.,
Fellow and Registrar.

COLLEGE HALL, KILDARE-STREET, DUBLIN.

October, 1897.

MEATH HOSPITAL

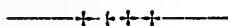
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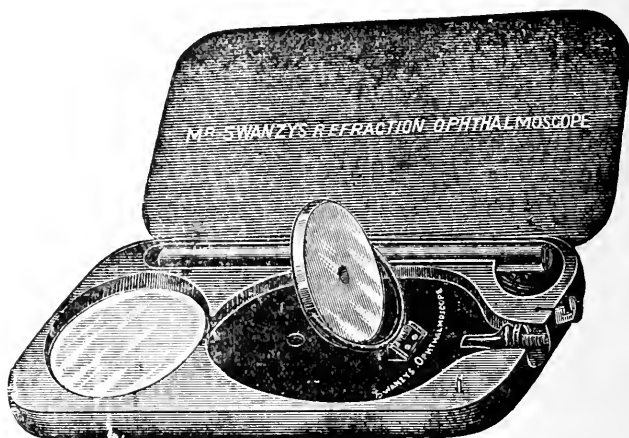
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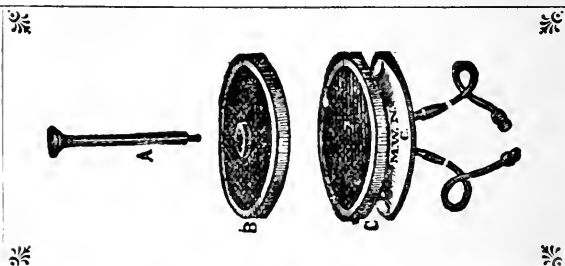
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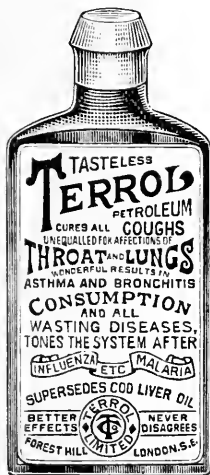
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2. King's College Hospital Reports; being the Annual Report of King's College Hospital, and of the Medical Department of King's College. Edited by NESTOR TIRARD, M.D.; W. W. CHEYNE, F.R.C.S.; JOHN PHILLIPS, M.D.; and W. D. HALLIBURTON, M.D. Vol. III. 1895-1896, - - - - -	302
3. The Nervous Affections of the Hand, and other Clinical Studies. By GEORGE VIVIAN POORE, M.D., F.R.C.P.; Physician to University College Hospital; Professor of Clinical Medicine and of Medical Jurisprudence, University College, London; Consulting Physician to the Royal Infirmary for Women and Children; Physician to the Cheyne Hospital for Incurable Children, &c., - - -	303
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7. A Pictorial Atlas of Skin Diseases and Syphilitic Affections. Edited and annotated by J. J. PRINGLE, M.B., F.R.C.P.; Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. Parts X. and XI., - - - - -	309
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PART I.

ORIGINAL COMMUNICATIONS.

ART. XII.—*On Acute Intestinal Obstruction.*^a By J. S. M'ARDLE, F.R.C.S.I.; Surgeon to St. Vincent's Hospital, Dublin.

(Continued from Vol. CIII., page 305.)

IMMEDIATELY the boiled saline solution was introduced into the abdomen a great change occurred. The dusky appearance of the face in great part gave place to a malar flush, the blue lips became red, and the pulse, which could hardly be felt, became full, and by the time he was fit for removal to bed he was bathed in a warm perspiration. The tongue, which had been dark, dry, and fissured, had become moist. He soon regained consciousness, and the evening found him in a fair way to recovery. At the first dressing, six hours after operation, there was some dark-coloured discharge, and about an ounce of brown serous fluid was removed from the abdomen. The glass tube was not removed until the third day, and from that time the progress of the case was favourable, and although he went through a regular typhoid attack recovery was complete.

Acute Colitis (Cæcum almost Gangrenous.)

CASE V.—On the 9th of June, 1896, Dr. Kilbride asked me to see an urgent case with him at Athy. Mr. — gave the following history:—For a long time his breath had been fœtid,

^a Read before the Surgical Section of the Royal Academy of Medicine, Friday, December 11, 1896. [For the discussion on this paper, see Vol. CIII., page 245.]

and he had suffered from hiccough and occasionally vomiting. Three weeks ago, after a dinner of meat, vegetables (cabbage), and beer, he got intense colicky pains, and the abdomen became swollen and slightly tender. A castor-oil draught gave him great relief, and he went to the south for a holiday. On June 5th, after a like meal, a recurrence of these symptoms took place. The bowels could not be got to act, although calomel and castor-oil enemata with long tube and soft rubber tube had been tried. Opium allayed the pain, and when I saw him the abdomen was distended, resonant left and centre, dull along right side; not much intra-peritoneal fluid; pulse full, 84; temperature normal; face dusky; pupils somewhat contracted; rectum empty and dilated.

We decided that laparotomy was necessary. Assisted by Dr. Kilbride and Mr. Cookman, I opened the abdomen in the middle line; subcutaneous and sub-peritoneal fat enormous. The omentum, which was very fatty, I found adherent all over the right side of the abdominal wall, and to the front of the cæcum. I separated it from the abdominal wall, and then proceeded to free it from the cæcum, when a rush of fœtid serum took place from the right iliac fossa. On exploring this region I found the outer side of the bowel dark purple in colour, with grey patches here and there over it. The meso-cæcum was so short that I was obliged to open the abdomen over the iliac crest. *This I did by pushing my hand well into the abdomen, and making my fingers project in the line of the intended opening. Separating the ring and middle fingers, I passed a stout scalpel through the entire thickness of the abdominal wall. A probe-pointed knife was now introduced, and the opening enlarged to the requisite extent.* The hand was now turned within the abdomen, and the semi-gangrenous cæcum pushed through the wound, where it was fixed by sutures engaging the healthy part. The patch, which showed signs of giving way, was cut off, and the bowel flushed with warm water. The patient soon rallied from the shock of operation, and made a rapid and uninterrupted recovery. He is now at business and in good health.

The method of making the secondary opening is very rapid and safe, and so deserves more than a passing mention. The delay occasioned by direct section and searching for the bowel is very pernicious, and is often the cause of a fatal termination. The hand within the abdomen easily brings to the new opening the portion of the intestine to be dealt with, after serving as

a guide to the incision, and as a protection for the underlying structures. As far as I am aware, this procedure has not been recommended heretofore.

Malignant Stricture of Colon.

CASE VI.—On June 11th, 1896, I was asked by Dr. James Little to see a case in Molesworth-street, and, with Dr. Bennett, we made a careful examination of Mr. R., aged fifty-four years, whose history was briefly as follows:—For some time he had suffered from attacks of diarrhœa alternating with constipation, the latter accompanied with left-side pain. For some weeks purgatives, and even enemata, failed to give him complete relief. He had been sent from the country to be under Dr. Little's care, and as enemata, carefully administered, failed to relieve him—the abdomen becoming tense and tender, and the pain paroxysmal—he promptly decided that surgical interference was necessary. The bowels had not been moved thoroughly for more than a week, and there was great tympanites, except at the left loin and inguinal region, which was dull. We had Mr. R. removed to 67 Leeson-street, and prepared for operation. Assisted by Dr. Bennett, and in presence of Dr. James Little, I opened the abdomen in the middle line, and allowed some brownish serum to escape. Then I passed my hand into the left iliac fossa, as we suspected sigmoid trouble. I found that piece of intestine distended and bulging towards middle line, and on exposing it we saw that it was dark in colour and tense. Following it downwards I reached a hard, unyielding mass at the edge of the true pelvis, and extending somewhat downwards. In the exhausted condition of the patient we considered it better to relieve the obstruction at once rather than carry out a resection, and so passing my hand over the sigmoid, and making it project above the crest of the ilium, I cut down, and as in Case V. used the hand within to bring the distended sigmoid into the secondary wound, where I secured it with many sutures *to the skin*. Suture of the central incision, free opening of the bowel, and flushing with boiled water, completed the operation. For some days we had some anxious moments about the case, but from the eighth day things went on favourably, and within a few weeks the patient was about in excellent health, which he still enjoys.

Dr. Bennett, to whose diagnostic skill this patient owes so much, rendered me very valuable aid in carrying out a rapid and successful operation.

Large Enterolith.

CASE VII.—Mrs. —, aged fifty-six years, came under my care on Sunday, January 10th, 1896:—

History.—For over three years she has had frequent attacks of abdominal pain, sometimes lasting a few days, accompanied by vomiting. Free purgation relieved her as a rule, but about Christmas, 1895, she was confined to bed and passed through a very critical time, very severe pain being felt below the 8th, 9th, and 10th costal cartilages on the right side. Since that time she has had repeated attacks of pain in the same region, always attended by distressing vomiting, which increased the pain.

On Wednesday, Jan. 6th, 1896, she felt as if one of the old attacks was coming on, and took some medicine. On Thursday the pain became intense, and she sent for Dr. Crinion, to whose kindness I am indebted for the following note of the case:—

Present Condition.—Vomiting of dark, foul-smelling fluid continued, causing great distress; her pulse was very easily compressed, 120 per minute; temperature, 99·5°. Face flushed and anxious-looking; tongue brown and furred; abdomen distended and tympanitic. An area of dulness, as marked in the accompanying diagram, existed to the right of the umbilicus, and both loins were dull, but cleared by placing the patient on her side. Rectal examination showed the pelvis filled with coils of small intestine, pressure on which elicited no evidence of pain. There were large, dusky patches over the abdomen, which was not tender on pressure. No coils of intestine could be felt through the abdominal wall; liver and splenic dulness present. Very little urine had been excreted for hours, and the patient was fast approaching a condition of collapse.

I determined on exploring the abdomen at once, and had the parts rendered aseptic and covered with a large corrosive sublimate dressing.

Very little ether was necessary to produce anæsthesia. Scrubbing the skin with ether, then sopping well with 1–500 corrosive sublimate solution, I made an incision four inches in length between the umbilicus and pubes, inserted my hand, and explored the cæcum and colon. Then pushing the great omentum upwards, I dipped my hand well into the centre of the pelvis to turn out the small intestine, when I came upon a hard mass, which I brought out through the wound and found to be contained within the small bowel, about 16 inches from the ileo-cæcal valve. The part of intestine above the mass was dilated and smooth; below it was

rugose and contracted—almost like a tape so flattened did it appear. I tried to pass the mass downwards towards large intestine, but failed to move it in the least. On examining more closely the part of the bowel engaged, I observed two dark spots—one near the mesentery, and the other on the convex side of the gut. There were patches of recent lymph on the bowel and mesentery here, and a port-wine-coloured serum welled up from the pelvis. During these manipulations, fearing that already ulceration had occurred on the mucous surface of the bowel, I desisted from further attempts at pushing the mass downwards, and wishing to cut through sound tissue in carrying out entero-lithotomy, I pushed the mass upwards. It readily moved in this direction, and when it reached healthy tissue I made an incision an inch in length in the long axis of the bowel, and exactly opposite the mesentery. Through this wound I readily extracted the calculus here shown (Fig. 1). The reason

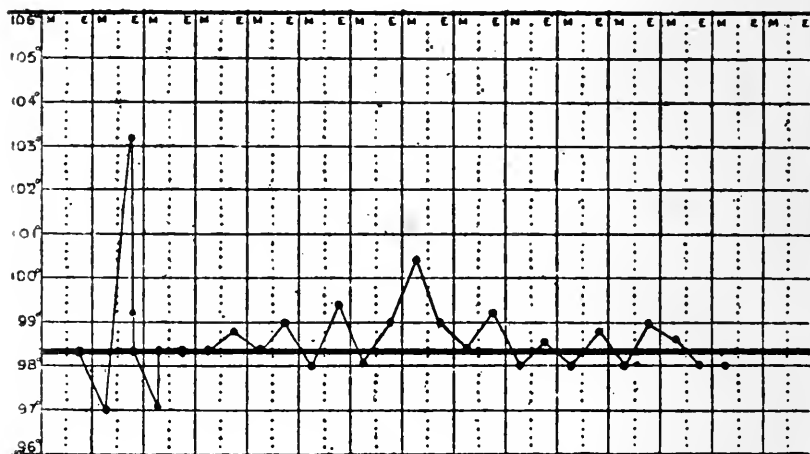


Fig. 1.

it would not pass down was seen at once. The sharp crystalline projections surrounding the thicker end were caught in the mucous membrane, and exciting spasm effectually barred further downward progress. A line of sero-muscular sutures closed the wound of the intestine, which was constantly irrigated with saline solution at a temperature of 100° F. during the operation. Removing the clamps I irrigated the gut for about 10 inches above the wound with saline solution at a temperature of 102° F. This excited peristalsis, and soon the contracted bowel below distended, and gas could be heard passing downwards. The intestines were now

gently replaced, and the omentum well drawn down over them. I did not flush the abdomen as is my custom. Deep and superficial sutures closed the abdominal wound, and the patient was put to bed, looking much better than when she was placed on the table.

Vomiting occurred just before removal from the table, and when the patient was settled in bed with warm clothing and hot jars I had the stomach thoroughly washed out with warm boracic solution. From that time no trace of vomiting has appeared. I told my assistants that I would expect a rise in temperature when the contents of the peritoneum became absorbed, and at 8 p.m. the temperature, as shown in chart, reached 103.2°F . In the



First rise commencing morning after day of operation ; second removed by purgation.

evening, when I saw the patient, there was no longer any dullness in the loins, the tongue was moist, urine had been voided, but as yet no flatus or fæces had passed, although the abdomen was less tense and had become flat. The pulse was small and quick, but the patient was not restless, nor had she any pain, but as the face looked dusky I ordered a teaspoonful of whisky to be given in each glass of hot water during the night. Gradual improvement occurred, and in the morning the temperature had fallen to normal.

Nothing of interest occurred until the evening of the 17th—that is,

7 days after operation, when the temperature rose to 100.4° . Although the bowels had acted freely, I ordered 5 grs. of calomel. This caused a copious evacuation, and some hours after the temperature became again normal, and so continued during the remaining days in hospital. This patient left hospital on the tenth day after operation, and she is now in perfect health.

Enormously Distended Gall Bladder, containing 450 Calculi, causing Obstruction.

CASE VIII.—This patient came to St. Vincent's with a note from Dr. Ninian Falkiner, to whom I am indebted for a memo. of the case, and to whose kindness and promptitude this patient owes her life. This patient was admitted late on the night of Feb. 16th, 1896. My assistant, Dr. Kennedy, who examined the case, made the following note:—For some years she has had, on and off, attacks of abdominal pain, which usually passed away after purgation. Five days ago this pain set in, but this time the old remedy, magnesium sulphate, failed to relieve the bowels, as did enemata; the pain became more violent, and as it increased it became paroxysmal. From being a girdle pain, it became more marked under the right costal arch, and down to the umbilicus; the abdomen meantime became distended and tense, and over the right side extremely tender on pressure. This condition continued, and Dr. Falkiner ordered her to hospital.

The chief points I noted in this case were jaundice, clammy perspiration, small, quick pulse, paroxysmal pain, and a history of constipation. *Added to this there was marked rigidity of the rectus abdominis on the right side.*

The significance of this rigidity is not sufficiently commented on in most papers on this subject. Whenever I have noted unilateral and continuous spasm of the rectus I have found, on opening the abdomen, either of three conditions—abscess of the liver, hydatid of the liver, or distended and inflamed gall-bladder.

There was no time to be lost, so I immediately opened the abdomen in the right semilunar line, the incision being 4 inches in length. On getting through the peritoneum I found the edge of the liver as low as the umbilicus; the abdominal wall was very vascular, and so also were all the organs inspected. On turning up the edge of the liver I found the gall-bladder enormously distended, and reaching downwards to the level of the crest of the ilium. It was adherent to the abdominal wall. The colon and the great omentum surrounded it, being closely adherent. With some difficulty I freed the gall-bladder so as to bring it well into the

wound, where I held it with forceps. It was evidently full of calculi, and so I opened it freely and flushed it out with warm boracic solution, removing with forceps 450 stones of various sizes. I now, owing to its great size, and the inflammatory condition present, fixed the gall-bladder to the abdominal wall, leaving a large opening to favour drainage and irrigation. Owing to the size of the liver and the displacement of the gall-bladder downwards, I was obliged to fix that viscus at the level of the umbilicus.

The course of this case was uneventful; recovery was uninterrupted. Of course, for some weeks there was a biliary fistula, but soon the motions from the bowel became stained with bile, and the external wound healed soundly.

In each of these cases, and indeed in every case of acute obstruction I have operated on, I found fluid in considerable quantity in the abdomen. Now, the removal of this fluid is of great importance, since in all cases where from obstruction the bowel becomes crowded with micro-organisms there is great danger of the *Bacterium coli commune* reaching any accumulation of nutrient material, such as the effusions which occur in the abdomen, and I have seen death result from septic absorption even when an attack of obstruction has at last yielded to enemata. This recalls to my mind the danger attendant on the reduction of a strangulated hernia in old people when the gut has been constricted for any length of time. Have we not all observed that in many of these cases six to ten or twelve hours after reduction collapse occurs, and before twenty-four hours death ensues, unless the abdomen be opened and well flushed with some aseptic fluid, such as boiled soda solution. Now in these cases in which such procedure has not been permitted I have found the abdomen after death to contain serous fluid in considerable quantity and very foetid. My reading of these phenomena is this—the strangulation has excited a peritonitis ascending along the intra-abdominal part of the gut, but here, owing to the blood supply being perfect, the wall of the intestine resists the passage of microbes, and so the fluid poured out is uninfected. Not so with the protruded portion. Here the vessels become engorged, intra-mural exudation occurs, the vitality is lowered, the micro-organisms are now free to invade the coats of the bowel, and multiplying rapidly soon

reach the serous coat, and through it the nutrient serum which surrounds it. Now once the bowel has reached this stage, which is often much hastened by taxis, there is grave danger in reducing the bowel without direct examination, not that strangulation continues, but because the infected fluid contents of the hernial sac are projected into a peritoneum full of a nutrient medium in which rapid multiplication goes on, and from which rapid absorption may be expected, and if the vitality be low, owing to age or debility, a rapidly fatal result occurs.

The next point worth noting in most cases of intestinal obstruction is the tendency of the bowel to remain distended, even after the obstruction has been relieved. This I have observed in twenty-seven cases arising from various causes, in all of which I opened the abdomen. I would not call attention to this were it not that I think many failures after laparotomy result from a want of appreciation of the danger attendant on closing the abdomen without exciting peristalsis. Exposure to air often excites contraction of the bowels. When this fails, irrigating them with saline solution generally suffices, but where this has failed I have, before closing the abdomen, washed out the stomach with warm boracic solution, and I have got my assistant to pass a tube well up into the colon, the end being directed by the hand in the abdomen. A siphon is now employed to introduce some quarts of boiled water at a temperature of 100° F. This rarely fails to excite peristalsis. The rectal tube is retained until flatus and fluid escape. Often this will be found useful when, owing to distension, it is difficult to return the intestines into the abdomen.

A third point of importance in the treatment, after removing the obstruction, is to adopt measures to ensure as far as possible intestinal asepsis. When the bowel has not been incised 3 to 5 grains of calomel should be given twenty-four or thirty-six hours after operation, and where there has been stercoral vomiting the stomach should from the start be washed out every sixth hour with warm boracic solution, or boiled water containing a few drops of iodine tincture.

Calomel is the best intestinal disinfectant. Under its influence the fœtor of discharges soon disappears, and the

ashen look of ptomain sickness gives way to a reaction which precedes the recurrence of normal health.

Nothing tends to bring one to a proper understanding of this subject more than a study of the causes of death in these cases—(1) When the obstruction is unrelieved, and (2) where operation has failed although the bowels have been evacuated.

Old writers, and even men of our own time, have done much to fog our knowledge of this subject—the former, through ignorance of the methods of examination; the latter, either from ignorance or from a desire to obscure the traces of unsurgical procedures. It only serves to retard progress when men wittingly or otherwise cover failure or ignorance by adopting and appearing satisfied with announcing a prominent symptom as the cause of death. What can be more absurd than to say that a patient who has been bled white has died from collapse? Is this condition not the outcome of a copious hæmorrhage which has been the real cause of death? Again, a patient's intestines have been returned into the abdomen chilled by lengthened exposure, without restoring their circulation. The patient weakened by continuous vomiting before operation never really rallies, because intestinal absorption is absent, and death is said to be due to exhaustion instead of to surgical misadventure. At times we hear that death has occurred on the third or fourth day after laparotomy, and because the temperature was normal for forty-eight hours after operation the procedure is robbed of discredit by using the word inanition instead of sepsis. In a fourth instance, where a plastic operation has been carried out, the patient has remained well until the time when catgut becomes absorbed, silk detached or bobbins loosened; suddenly the quiet of returning health gives way to the nightmare of impending disaster, an incompetent nurse gets irritable because she cannot control the tiring restlessness of her patient, and only when she sees the clammy sweat, and notes the erratic temperature that precedes death, does she realise that the patient is beyond the reach of all things earthly.

In all seriousness, we hear that secondary collapse is the cause of this misfortune. Who that has studied the writings of Madelung, of Billroth, of Czerny, or, indeed, of a host

of modern writers, can fail to recognise in these cases examples of perforative peritonitis, arising, as Madelung has clearly shown, from faulty suture material, or imperfect application of one or other of the many appliances used for securing continuity of the bowel?

When will Surgery be freed from the incubus of ancient and misleading expressions, and brought up in some degree to the level of the exact sciences?

We desire to stand between our patients and death, but so long as we delude ourselves by using terms which convey no meaning to the minds of truthful and intelligent observers how can we hope to be of service in hours of great need, when exact knowledge and prompt action indicated thereby can alone point out the road to victory? We must always remember that, however brilliant a surgical procedure may appear, the completeness of its success should be the only measure of its beauty. We are marching onwards to a position grander than the world has ever seen, more brilliant than our predecessors ever contemplated. Are we to lapse again into the benighted condition which preceded our recent awakening? Are we to go back to the salves and syrups, the cordials and clysters of the past, or are we to trust to our own vigorous minds, strong hearts, and trained hands? Is this march to victory to be checked because a few of the rank and file cry "Halt!" No; triumph is the just reward of those who, having "Excelsior" for their motto, do all things to deserve success, and press always onwards. To those who would cry "Halt!" in our march we say, "Fall out!" The ranks close up, and, when the spoils of victory come to be counted, they get but the straggler's share.

CONCLUSIONS.

Should there be difficulty in finding the site of the obstruction:—

- (a) Follow engorged coil of intestines upwards and downwards until point of obstruction is reached or turn out all the intestines.
- (b) Remove all fluid from Douglas' pouch and loins by irrigation with sterile water.
- (c) Restore colour of bowel, and establish peristaltic move-

ments by heating with neutral saline solution. The removal of the primary cause of intestinal obstruction is not always followed by relief of the symptoms.

- (d) Should there be difficulty in returning intestines, elevate pelvis in Trendelenburg's position, or, if necessary, open and wash out.
- (e) Before all, and above all these conclusions, I would lay down this rule, or formulate this axiom:—"When a surgeon is called to a case of complete obstruction of the bowel, with evidence of peritoneal effusion, it is his duty to operate at once."

ART. XIII.—*Infantile Mortality in Ireland.* By PATRICK LETTERS, M.D.; Diplomate in State Medicine; Fellow of the Royal Academy of Medicine in Ireland; Fellow of the Royal Institute of Public Health.

IF there be one feature more notable than another in the every-day health reports we see published, it is the very general omission to include the rate of infantile mortality. Death-rates for the entire populations of our large towns are regularly recorded in the leading newspapers, great attention is given to the zymotic death-rate, and to that of the various zymotic diseases individually, as affecting these large towns, meteorological observations are carefully chronicled, but the rate at which our infantile populations perish is rarely stated. It is not easy to account satisfactorily for this omission. Infantile deaths, even in the smallest communities, cannot be regarded indifferently—in large centres of population they possess supreme interest, and in the country at large they are, or should be, events of national concern, demanding our most careful investigation. A good idea of the importance of the subject may be formed from the numbers of infants under the age of one year who die all over Ireland in the course of a single year, and by noting their proportion to the total deaths. During the year 1896 there died in Ireland 76,035 persons, of whom no fewer than 10,195 were children under the age of one year. The infantile mortality, therefore, amounts to 13·4 per cent. of the general mortality, a proportion quite ample to invest the subject with all the

interest and importance claimed for it. It may be advanced by some that these early deaths, numerous though they be, have not equal interest with deaths occurring during the productive periods of adult life, that they are largely unavoidable, and that the history of all times and places proves that infants have died at an immensely greater rate than older children or adults up to the point of extreme old age. This contention carries some force, but as an argument it must not be accepted without considerable qualification. It is admitted that we do not hope to reduce the infantile death-rate below a figure that will always be high relatively to death-rates at most other ages. This, however, does not touch the point that infantile death-rates are reducible, nor that the causes which operate in their production are entirely beyond our control. If we can trace a connection between death-causes and death-rates, and if the causes are in part removable, the deaths should be, in corresponding measure, preventable. The reduction of the infantile death-rate is, therefore, on the assumption made, an eminently practical question, and at the same time one upon which too little attention has been centred. By the infantile death-rate is ordinarily understood the proportion of deaths of infants under one year of age to births registered during the same period over which the deaths occur, and is expressed as so many per thousand births. This is the sense in which I shall use the term. If the infantile death-rate were measured after the manner of the general death-rate, by stating it as a proportion per thousand of all the children living under the age of one year, the result would be less accurate, on account of the uncertainty existing as to the exact numbers of children alive in any locality under the age of one year. Registration of births is now so universally complied with, that this official record has, by common consent, been taken as the standard whereby infantile mortality may be estimated with the nearest approach to absolute accuracy. Thus measured, infantile death-rates are more reliable for statistical comparisons than general death-rates are. In comparing the infantile mortality of one city with another, or of one county with another, we do not concern ourselves with any of those corrections which are almost always necessary to be

made when the general death-rate of one place is brought into critical comparison with that of another. Population is a varying factor everywhere—in one locality we may have a preponderance of the aged, amongst whom the mortality is high; in another we may have an excess of middle-aged persons, amongst whom the mortality is low. Two such places cannot be compared without correction, if the general death-rate is to be accurately judged between them; but these two same places can be brought into perfectly fair comparison as regards their infantile death-rates, because we measure this, not by the varying standard of population, but by the fixed value of registered births. As a further illustration of the reliability of the infantile death-rate, let us take a suppositious case. Dublin is found to record an infantile death-rate of 154—*i.e.*, 154 infants under the age of one year die to every thousand births registered. An English city of the same size as Dublin records 175. From this statement we correctly conclude that infant life is considerably more secure in Dublin than in the English city compared with it. Let us now suppose that the general death-rate in Dublin stands at 25 per thousand of its population, and that the English city records only 18, does this prove that Dublin is the more unhealthy city of the two? Not necessarily, unless the two places compared have an identical age and sex-distribution of their respective populations, and unless the English city is on a par with Dublin in the matter of public institutions and hospitals. As nearly one-half of all infantile deaths occur within the first three months of life, and as children under one year of age do not die in hospitals, it is clear that the infantile death-rates of different localities can be brought into reliable comparison without any corrections. It should be remembered also that migration does not enter to disturb the reliability of infantile rates, as it may with general rates. The quarterly returns issued by the Irish Registrar-General do not give infantile mortality-rates, except for the whole country, but from the numbers of births and deaths under one year of age recorded in the various cities and counties, the rates are determined by easy calculation. The basis of all the calculations worked out is, therefore, the four quarterly returns of the Irish Registrar-General for the

year 1896. By summation of these returns it is found that 107,900 children were born in Ireland in 1896. As already stated, the deaths under one year of age amounted to 10,195, the infantile mortality-rate of all Ireland in 1896 was, therefore, 94. At this stage I would like to introduce a comparison with all England and Wales. The English Registrar-General's Annual Report for 1896 is not yet available, but as rates for an entire country do not vary materially from year to year, the figure for 1895 will serve my purpose sufficiently. The infantile death-rate of England for 1895 was 161. This means that for every 100 infantile deaths in England there are, proportionately, only 58 in Ireland, and therefore, broadly, we are justified when we say that infant life is nearly twice as safe in Ireland as it is in England. The infantile death-rate of England is also steadily increasing, for, in the ten years preceding 1895, the mean rate was only 146. It would be interesting to know whether the Irish rate is increasing. The Irish Registrar-General's returns in past years would supply the data for this inquiry, should anyone be industrious enough to work it out. Looking to general death-rates, Ireland in 1896 shows 16·7, England same year gives 16·9. Here again the advantage rests with Ireland, although to a far less extent than in the case of infantile mortality. Death-rate all over Ireland is to death-rate all over England in the proportion of 98·8 to 100.

Returning to the Irish infantile death-rate of 94, the question for solution is, whether 94 is an absolutely high or low figure, having regard to the social circumstances, and to the industrial and agricultural pursuits of the Irish people. To solve this point a good deal of analytical work must be undertaken. We must find out in what particular localities high rates and low rates are distributed, and, to eliminate error from our calculations, we must be careful to deal with sufficiently large areas. Separately, large and smaller urban districts should be examined, and large rural areas throughout the country should be inquired into, precautions being observed against error from paucity of data.

The subjoined table is drawn up to show provincial rates:—

Infantile Mortality Rates in the Irish Provinces.

—	Population in 1891	Births in 1896	Deaths under 1 year in 1896	Infantile Death-Rate
Leinster -	1,187,760	27,640	3,051	110
Munster -	1,172,402	25,443	2,204	87
Ulster -	1,619,814	39,802	3,876	97
Connaught -	724,774	15,015	1,064	71

This table is conclusive on the following points—(1) That infant life is much more secure in Connaught than in any of the other large divisions of Ireland; (2) that children born in Leinster have a distinctly smaller chance of surviving one year than in the other provinces; (3) that infantile death-rates are not governed by population; (4) that the Connaught and Munster rates are 23 and 7 respectively below the general Irish infantile mortality-rate; (5) that the Ulster rate is 3 above, and the Leinster rate 16 above all Ireland. The next most necessary table for my purpose, if not the most important of all, is that showing the infantile mortality in the large urban districts. Fifteen of these are found to have populations over 10,000. Their combined population almost reaches 900,000. In the subjoined table they are arranged in the order of their populations.

Infantile Death-Rates in the Fifteen Large Urban Districts.

Dublin - - -	154	Dundalk - - -	62
Belfast - - -	148	Lisburn - - -	121
Cork - - -	107	Drogheda - - -	127
Limerick - - -	102	Wexford - - -	125
Londonderry - - -	123	Lurgan - - -	89
Waterford - - -	162	Kilkenny - - -	97
Galway - - -	108	Sligo - - -	96
Newry - - -	146	The fifteen Districts collectively	140

The collective death-rate, it should be noted, has been calculated, not by averaging the fifteen rates, but by taking the combined births and infantile deaths, and working out the proportion per thousand births in the ordinary way. The average of the fifteen rates would give only 117, a figure which would quite understate the collective death-rate of these districts. The chief points to note in this table are—(1) that the collective rate is almost double the rate for the province of Connaught, or about one and a half times the rate for all Ireland; (2) that, although the larger centres show high rates generally, and the smaller districts low rates, there is no uniform ratio between population and rate; (3) that Waterford, a district with a population scarcely over 20,000, is the most unsafe locality in Ireland for infant life; (4) that Dublin, Belfast, and Newry show rates much in excess of the remaining districts; (5) that Dundalk is the safest large urban district in Ireland for infant life; (6) that all the other districts, Lurgan alone excepted, show rates which are, for the most part, considerably in excess of the rate for all Ireland. It is a well-established fact in vital statistics that density of population exerts a deleterious influence on health, and affects the mortality figures in most of our large urban communities very decidedly. It is also settled that this influence of increased aggregation of population tells more heavily on the death-rates of the young than of the old. If these fifteen urban districts be arranged in the order of their densities of population upon their respective areas they will come in the following order:—Belfast, Waterford, Cork, Drogheda, Wexford, Newry, Limerick, Londonderry, Dublin, Lurgan, Kilkenny, Lisburn, Dundalk, Sligo and Galway. The difference between Belfast and Galway in respect of density is very considerable, the former urban sanitary district having 43·6 persons to an acre, and the latter only 2·6. The density in Waterford is 39·1, and doubtless is one of the contributory forces determining the high infantile mortality in that city. The density over the whole of the Dublin registration district is only 14·1 persons to the acre, but doubtless there are localities within the district as densely peopled as

Belfast, alongside of others having a low density. In a mixed community like Dublin, the causes of infantile mortality in constant operation must be legion; and if density alone is less conspicuous than in Belfast, other agencies, such as artificial feeding amongst the infants of the better classes, no doubt add largely to the gross infantile mortality. The neighbouring towns of Drogheda and Dundalk show very differently in their infantile death-rates. Might some explanation of the difference be found to lie in the fact that Drogheda district has 26·2 persons to an acre, while Dundalk has only 9? In other places density does not correspond with mortality, showing the operation of other factors. Galway has a low density with a rather high mortality. Newry has a heavy mortality with moderate density, and Sligo shows a very low density with only a comparatively low mortality. Passing now from the fifteen large urban districts, we find there are still fifty districts in Ireland, which, under the Public Health Act, have urban powers conferred upon them, and are designated urban sanitary districts. In order to get at the entire urban mortality, these fifty districts must be considered. For the purpose of investigating infantile mortality, I have divided these urban districts into two lots of twenty-eight and twenty-two. The class of twenty-eight contains all those urban districts having populations over 4,000 but under 10,000—the class of twenty-two contains all the urban districts in Ireland under 4,000. Although I have worked out the infantile mortality-rates of each of these fifty towns individually, my observations, in the main, will apply to their collective rates only, except in special districts where unusual figures have been found.

The births registered in the twenty-eight intermediate towns in 1896 were 4,840, and the deaths under one year of age were 509. The infantile death-rate is, therefore, 105. The twenty-two small towns gave 1,501 births, and 133 deaths, thus showing a collective death-rate of 89. In the whole sixty-five urban sanitary districts of Ireland, 35,407 births were registered in 1896, and 4,720 infantile deaths occurred. This is equivalent to a collective urban infantile death-rate, for all Ireland, of 133. Putting the urban rates into tabular form, we have—

Collective Infantile Death-rate—

In the fifteen large towns, ...	140
In the twenty-eight intermediate towns,	105
In the twenty-two small towns, ...	89
In all the urban districts of Ireland,	133

The points established here are—(1) That infantile death-rates in the large urban districts greatly exceed the general and provincial rates; (2) that the intermediate towns also exceed the general and provincial rates, excluding Leinster, with which province they are almost on a par; (3) that infant life is greatly more secure in the moderately-sized towns than in the large towns, and also distinctly safer in the small towns than the intermediate; (4) that urbanisation in Ireland, as elsewhere, constitutes a serious danger to child life. In looking over the list of intermediate towns, a few places show exceptionally high rates. Kinsale heads the list with the remarkable infantile death-rate of 224 for the entire year. It is found, however, that the first quarter of the year was mainly responsible for this excessive rate. In that quarter infants died in Kinsale at the extraordinary rate of 450 per thousand births registered. During the second quarter of the year the rate fell to 107, in the third quarter it rose to 240, and fell again in the fourth quarter to 160. Altogether Kinsale seems a dangerous spot for child life. Kilrush gave a rate of 174 for the year, but this was mainly due to excessive mortality in the third quarter, when the children were dying at the rate of 400 per 1,000 births registered. It is satisfactory to note that this fearful rate was not maintained throughout the year, for the first quarter gave a rate of 44 only, the second quarter 121, and the fourth 67. While Kilrush may be regarded with distrust as a place of safety for young lives, it should be remembered that absolute conclusions cannot be drawn from so small a district. The rate for the third quarter in Kilrush is certainly remarkable, but statistically it merely indicates a small urban possibility, nothing more. Carrick-on-Suir shows an annual rate of 160, and Dungarvan 154. Taking the proximity of Waterford city into consideration, it would seem that these south-eastern towns are decidedly unfavourable to child life.

Amongst the towns showing a remarkably low rate Banbridge is conspicuous with the singularly low rate of 36 for the year. It would not be safe, however, to reason from this that Banbridge will always be found the happy spot it was in 1896. The low rate is simply due to the accident that, for nine months out of the year, only one death of a child under one year of age occurred in Banbridge. No conclusion can be drawn from the low infantile death-rate of Banbridge in 1896, but the interesting fact is worth recording. Out of the list of twenty-eight intermediate towns, the following show high rates:—Bray, 135; Clonmel, 132; Thurles, 128; Enniskillen, 130; Athlone, 124; and Ballinasloe, 133. It is also found that there are only nine towns having rates below the general rate for Ireland. These are Enniscorthy, Ennis, Fermoy, Queenstown, Youghal, Ballymena, Banbridge, Carrickfergus, and Coleraine. Turning to the list of twenty-two towns under 4,000, these places are too small individually to yield any general deductions. Collectively, however, they have some value for statistical purposes, and this conclusion seems warranted—that small urban districts are distinctly more favourable to infantile life than larger places. Amongst these small towns, Templemore heads the list with a mortality figure of 167. Clonakilty comes second with 155, and Belturbet third with 138. The lowest rates were found in Granard (42), Wicklow (60), Bangor (64), Warrenpoint and Clones (each 65).

Before proceeding to localise the infantile death-rates of whole counties, and the rural parts of counties exclusively, it might serve some useful purpose, at this stage, to see if the general death-rate and the zymotic death-rate, in the large urban districts, bear any uniform ratio to the infantile rate. The object of the comparison is simply to throw all the light possible on the infantile rate, in order that its incidence may become thoroughly understood, and its influence perhaps better judged. Both rates, general and zymotic, are stated in the usual way as rates *per mille* of the population. The responsibility for the accuracy of the figures rests with myself, but they have been very carefully worked out from the four quarterly returns of the Irish Registrar-General for 1896.

General and Zymotic Death-Rates in the Fifteen Large Urban Districts.

—	General Rate	Zymotic Rate	—	General Rate	Zymotic Rate
Dublin -	24.0	2.3	Dundalk -	14.4	0.7
Belfast -	24.6	3.6	Lisburn -	17.6	1.0
Cork -	22.2	1.2	Drogheda -	17.0	0.5
Limerick -	19.7	0.8	Wexford -	16.8	0.5
Londonderry -	22.7	4.1	Lurgan -	18.1	1.8
Waterford -	23.1	2.4	Kilkenny -	19.3	1.1
Galway -	20.3	0.9	Sligo -	21.4	1.3
Newry -	23.0	1.7			

The noteworthy points in this table are:—(1) That Belfast exceeds Dublin sensibly in its general, and very materially in its zymotic mortality; (2) that, next to Belfast and Dublin, the highest general rates are found in the order of Waterford, Newry, and Londonderry; (3) that Dundalk is by far the healthiest urban district in Ireland; (4) that the three districts showing the heaviest zymotic rates in 1896 were, in order, Londonderry, Belfast, and Waterford; (5) that the three having the lowest rates were, in the order of their lowness, Drogheda, Wexford, and Dundalk. Referring to the value of the zymotic rate as a sanitary test, we should know how it has been caused, and over what period a high or a low rate has extended. Londonderry, although fifth amongst our large urban centres in the order of its population, and also fifth in the order of its general death-rate, should not normally be first in the order of zymotic rate, nor will it be found in that unenviable position, I feel assured, if its records for a series of years be examined. From the detailed figures before me, it is quite clear that Londonderry suffered from a severe epidemic of some kind, most probably measles, during the second and third quarters of the year. The quarterly zymotic rates for Londonderry in 1896 were, in order, 2.0, 7.3, 4.3, and 2.7. It is quite reasonable to infer, from the uniformity of the quarterly

rates throughout the year recorded in Belfast, Dublin, Waterford, and the other large towns, that these do not depart very much from the normal rates always existing in these places. Returning to the infantile mortality of the fifteen large urban districts, we should observe that Dublin, although somewhat healthier than Belfast, is decidedly more unfavourable to child life. Waterford comes out to serious disadvantage in both respects, with this peculiarity, that the insecurity of infant life there is a far more pronounced feature of its insalubrity than its high general death-rate. Dundalk stands well in all respects, proving not only good sanitation, but the existence of such elements as favourably influence child life. Drogheda is by no means an unhealthy town—its zymotic death-rate in 1896 was absolutely the lowest of the fifteen urban districts, yet child life perishes in it at double the rate it does in the neighbouring town of Dundalk. In most of the other districts it is impossible to trace a uniform connection between the infantile and the general or the zymotic rate. This leads up to the conclusion that infantile deaths are not largely caused by the same agencies that destroy adult life, and that zymotic diseases have next to no share in their production. I shall supply proof of this assertion before concluding; and meanwhile, let us examine the distribution of infantile mortality in the counties. In dealing with this part of my subject, it appeared to me that no investigation would be satisfactory which was not based upon the infantile mortality of both the urban, or rather the combined urban, and the rural parts of each county, separately stated. It has been pointed out that there are sixty-five urban sanitary districts in Ireland. These are scattered, here and there, somewhat irregularly throughout twenty-six counties. The remaining six counties have no urban districts, and hence, in these cases, the general county rate and the rural county rate are identical. The six entirely rural counties are Kildare, Queen's county, Tyrone, Leitrim, Mayo, and Roscommon. The following table has been prepared to show in the first column of figures the infantile mortality-rate of each entire county, in the second the collective rate of the combined urban districts in each county, and in the third column the rural county rate only:—

Infantile Death-Rates in the Counties.

—	Entire County Rate	Urban County Rate	Rural County Rate	—	Entire County Rate	Urban County Rate	Rural County Rate
Carlow -	73	96	66	Tipperary -	81	135	68
Dublin -	148	153	108	Waterford -	114	161	89
Kildare -	86	—	86	Antrim -	124	147	79
Kilkenny -	94	97	93	Armagh -	84	100	78
King's Co. -	77	111	74	Cavan -	67	113	66
Longford -	63	42	64	Donegal -	68	133	67
Louth -	76	92	61	Down -	98	114	81
Meath -	76	99	71	Fermanagh -	68	130	61
Queen's Co. -	72	—	72	Londonderry	97	118	85
Westmeath -	86	124	80	Monaghan -	71	67	78
Wexford -	83	106	75	Tyrone -	76	—	76
Wicklow -	79	60	81	Galway -	68	113	63
Clare -	68	132	61	Leitrim -	69	—	69
Cork -	94	109	88	Mayo -	75	—	75
Kerry -	69	99	65	Roscommon -	62	—	62
Limerick -	90	102	84	Sligo -	80	97	78

A glance up and down these columns shows what might be expected—that urban rates generally exceed entire county rates, and that these again are higher than the rural county rates. The exceptions to this rule, neglecting the six non-urban counties mentioned, are Longford, in which the figures are all in reversed order, and also Wicklow and Monaghan, where the same peculiarity is observed. If the entire county rate column be examined, it is found that Dublin easily holds first place as a fatal locality for infants, Antrim comes second, Waterford third, Down fourth, Londonderry fifth. These counties all exceed the general rate for Ireland. Two counties, Kilkenny and Cork, record the same rate as

the country generally. The remaining twenty-five counties show rates below that of Ireland. The lowest whole-county rate is found in Roscommon, and the only other counties with rates under 70 are Longford, Clare, Kerry, Cavan, Donegal, Fermanagh, Galway, and Leitrim.

The urban county rate column discloses the fact that the combined urban districts in county Waterford, or, in other words, that Waterford city and Dungarvan are clearly the most dangerous spots in Ireland for infant life. We have already seen the rate in Waterford urban district to be 162. Dungarvan alone has an infantile death-rate of 154, the two combined work out to 161. Next to the urban parts of Waterford, the collective urban rates of the following counties, in order, show the highest—Dublin, Antrim, Tipperary, Donegal, Clare, and Fermanagh. The operating causes are readily seen in Dublin and Antrim, but for Tipperary, Donegal, Clare, and Fermanagh explanations may be looked for. The urban districts in Tipperary are five—Thurles, Carrick-on-Suir, Cashel, Clonmel, and Templemore. Donegal has only one—Letterkenny—with the high infantile death-rate of 133. In the matter of infantile mortality, Letterkenny is quite unworthy of the remarkably healthy county in which it is situated. The general death-rate in Clare is always higher than in Donegal, although it is by no means an unhealthy county. The united urban districts of Ennis and Kilrush, however, give it the high place it holds on the urban county rate. The general death-rate of Fermanagh is only a shade under that of Clare, and it owes its high position in the urban column of the county table entirely to the influence of Enniskillen. Longford shows the lowest urban rate. This is due to the fact that Granard, the only urban district in the county, has an infantile mortality so low as to render the rural county rate a shade higher than the whole county rate.

(To be continued.)

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Twentieth Century Practice. An International Encyclopædia of Modern Medical Science by leading Authorities of Europe and America. Edited by THOMAS L. STEDMAN, M.D., New York City. In Twenty Volumes. Volume X. Diseases of the Nervous System. London: Sampson Low, Marston & Co., Ltd. 1897. 8vo. Pp. 859.

THE issue of the tenth volume of this work reminds us that the Editor has completed more than half his task. We heartily wish him a continuance of health, and of that ardour which has so far enabled him to surmount all difficulties in discharging his herculean labours.

In this, the tenth, volume of *Twentieth Century Practice* the all-important and difficult subject of Diseases of the Nervous System is discussed. The separate articles are few—ten in number; the authors are still fewer—six all told. Of the six contributors, five hail from the United States of America. The only European is Dr. Charles Samson Féré, Physician to the Hospice de Bicêtre, Paris. From his pen alone come nearly 300 of the pages in the volume. The next largest contributor is Dr. Joseph Collins, Visiting Physician to the Hospital for Nervous Diseases, New York, and Instructor in Nervous and Mental Diseases in the New York Post-Graduate Medical School. The other contributors are Dr. Sanger Brown, Professor of Medical Jurisprudence and Hygiene in the Rush Medical College, Chicago; Dr. Charles L. Dana, of New York, whose name is a household word as a neurologist of world-wide reputation; Dr. Howell T. Pershing, Professor of Nervous and Mental Diseases and Medical Jurisprudence, University of Colorado, Denver; and Dr. Bernard Sachs, Professor of Mental and Nervous Diseases, New York Polyclinic.

Dr. Collins' treatise on Disease of the Brain opens with a retrospective glance at the advances that have been made in the knowledge of the structure and architecture of the brain within the past fifty years; in the interpretation of its physiological action, and in the application of the principles of modern pathogenesis to a solution of its manifold diseases. The author points out that fifty years ago "Watson's 'Practice of Physic' was a storehouse of up-to-date medical lore in the English language. To-day it is held in esteem, not only because it is a historical repository, but because of the beauty of its style, and the felicity of its clinical descriptions. In the light of our present knowledge, its comments on the causation of disease are lamentable, its teachings on pathogenesis absurd, and its therapy semi-barbarous. It may be said that, withal, its clinical descriptions are unsurpassed, and this is readily granted. But descriptions of disease do not materially advance our ability to prevent or to treat them" (page 3).

We notice with some satisfaction that Dr. Collins discards the idea that cerebral anæmia and cerebral hyperæmia exist as "individual clinical entities." Accordingly, no space whatever is given to these conditions in his treatise. "Not many years ago," he says, "flimsy superstructures of symptoms were built, particularly by American and German writers, one to represent anæmia and the other hyperæmia of the brain. . . . For a time, happily a short one, these teachings were accepted by the profession, and long-drawn-out transcriptions of imagery, purporting to be a description of anæmia and hyperæmia of the brain, found their way into many text-books and treatises" (page 7). He adds: "To-day, while admitting that cerebral hyperæmia may occur during a paroxysm of pertussis, or associated with a dilated right heart, or even as the result of intense mental application, particularly in connection with the ingestion of cardiac stimulants, and that anæmia of the brain may occur as a manifestation of general hydræmia, the writer does not concede the necessity of considering these conditions as clinical entities nor (or) apart from the factors that produce them."

The section on the morphology and anatomy of the

brain is illustrated by a series of drawings from Van Gehuchten.

Among the brain diseases described by the author perhaps the most interesting are acute superior poliomyelitis (nuclear ophthalmoplegia), acute inferior poliomyelitis and poliomyelitis, and acute hæmorrhagic encephalitis. It is not going too far to say that the differentiation of these affections marks a new era in the diagnosis of cerebro-spinal lesions, and throws a flood of light upon a group of morbid symptoms which have been hitherto most perplexing, and have often eluded explanation.

Hereditary cerebellar ataxia, first described by Frazer in 1880, and subsequently by Nonne in 1891, is to be carefully distinguished from hereditary spinal ataxia (Friedreich's disease). First, the myotatic irritability, knee-jerks, ankle clonus and elbow-jerks are preserved or increased in the cerebellar disease. Secondly, true nystagmus is absent. Thirdly, the striking mental defect is diagnostic. Fourthly, its early onset, the absence of sensory symptoms, the intensity of inco-ordination in the upper extremities, and the titubation, or inability to preserve a constant perpendicular of the body, are all in favour of the cerebellar rather than of the spinal malady.

In writing on "Parasites of the Brain," Dr. Collins observes that "if a medical literature of Iceland and other polar regions existed, it is not at all unlikely that mention of its occurrence therein would be common."

It may interest Dr. Collins to refer him to a monograph on Helminthology, by Dr. H. Krabbe, of Copenhagen, which was published in 1865, and which deals especially with hydatid diseases in Iceland. The title of the work is "Helminthologiske Undersøgelser i Danmark og paa Island med særligt Hensyn til Blæreormlidelserne paa Island" (Helminthological Investigations in Denmark and Iceland, with special reference to Hydatid Affections in Iceland). Dr. Krabbe's work was reviewed by the late Dr. William Daniel Moore, of Dublin, in the number of the *British and Foreign Medico-Chirurgical Review* for October, 1866 (Vol. XXXVIII., page 285, *et seq.*). Dr. Krabbe informs us that

a regular system of medicine has existed in Iceland only during the last 100 years (he wrote in 1865). The first authorised physician in the island, Bjarne Povelsen, was appointed in 1760. He, as well as John Petersen, who flourished 1775-1801, and was author of an Icelandic medical work, and John Svendsen, 1794, in their descriptions of the "*Malum hypochondriacum*" and of the "*Hepatalgia omnis generis maxime frequens*," all show that cases of the hydatid disease, though not fully recognised, had come under their observation. There is indeed good reason to believe that this affection has been epidemic in the island for centuries, as it is to the present day. In 1803 the five district physicians who were then practising in Iceland constantly mentioned hydatid disease as one of the most important chronic diseases of the island and as general in all districts of the country. We have ourselves referred to Dr. Krabbe's work, and fail to find in it any mention of hydatid disease of the brain. As usual, echinococcus-cysts occur most frequently in the abdominal organs, particularly the liver. Examples are also recorded by Dr. Krabbe of the occurrence of echinococci superficially beneath the skin, especially around the upper part of the thorax. These observations should set at rest the question of the prevalence of hydatid disease of the brain in Iceland, although it may be that in fatal cases the brain has not been critically examined *post mortem*, and so local disease has escaped detection.

Very excellent indeed and admirably clear is Dr. Dana's account of intracranial hæmorrhage, embolism, and thrombosis. We are tempted to quote one paragraph only in support of this statement. Dr. Dana writes—

"The reason for the particular location of cerebral hæmorrhages is explained upon simple mechanical causes. The blood pressure in the internal carotid is about one hundred and fifty millimetres. Now, the blood passing through the internal carotid goes almost directly into the circle of Willis, and with almost equal directness into the central arteries which are given off from it and its branches; consequently the blood pressure in these central arteries is relatively high. On the other hand, the blood pressure in the cortical arteries, owing to their length and wide distribution, is much lower. One

of the arteries which seems to receive this excessive pressure most directly is a branch of the middle cerebral known as the *Lenticulo-striate artery*, and Charcot calls this 'the artery of cerebral hæmorrhage'" (page 289).

It is much to be regretted that the usefulness of a beautiful figure, at page 274, showing the part of the brain most often affected in cerebral hæmorrhage has been curtailed by cutting off the sides of the plate, and with them the explanatory lettering of the various structures shown in the section. The letters "C.N.," "L.N.," "O.T.," "E.C.," and "I.C." have, however, been inserted to compensate in some measure for this defect.

Dr. Bernard Sachs, of New York, contributes an article on Cerebral Tumours, in which he discusses with much ability the question whether the results of surgical treatment have been such as to encourage us to recommend surgical interference in many cases. He points out that, *for the present*, tumours at the base of the brain and in the interior cannot be reached by the surgeon. "From my own experience," he says, "I am convinced that cranial surgery must be practised with even greater care than has been the case hitherto, and that above all the effect of shock from the operation must be avoided." But how is it to be avoided?

Dr. Joseph Collins writes on Diseases of the Meninges. His divisions of the subject are: Leptomeningitis, meningeal tuberculosis, sarcomatosis of the pia, chronic meningitis, syphilitic meningitis, cerebro-spinal syphilis, pachymeningitis, and meningeal hæmorrhage.

M. Charles Féré's monograph on Hysteria is characteristically French. It simply bristles with "jaw-breaking" technical terms, among which the *æsthesias*, *odynias*, and *algias* take first place. But this is, no doubt, in part due to the subject. The section on the nature of hysteria, if somewhat abstruse, is an interesting historical survey. M. Féré considers that "the new discoveries concerning the morphology of the nerve-cells, and in particular those of the cerebral cortex which have resulted from the works of Golgi and Ramon y Cajal, have served to explain the theoretical conceptions of the psychomotor functions in

general and of the manifestations of hysteria in particular" (page 558).

Two elaborate articles from the same pen on "Epilepsy" and "The Spasmodic Neuroses" respectively follow. The three concluding *brochures* in the volume are on "Neuras-thenia," by Dr. Dana; "The Disorders of Speech," by Dr. Howell T. Pershing, of Denver; and "The Disorders of Sleep," by Dr. Sanger Brown, of Chicago.

The reputation of "Twentieth Century Practice" is well maintained by this tenth volume, which is one of the best as it is one of the most important as regards the subject-matter which has yet appeared.

King's College Hospital Reports; being the Annual Report of King's College Hospital, and of the Medical Department of King's College. Edited by NESTOR TIRARD, M.D.; W. W. CHEYNE, F.R.C.S.; JOHN PHILLIPS, M.D.; and W. D. HALLIBURTON, M.D. Vol. III. 1895-1896. London: Adlard & Son. 1897. Pp. 334.

OWING to the death of Sir George Johnson in June, 1896, many changes in the hospital staff occurred, on account of which some delay took place in the publication of this, the third, volume of the King's College Hospital Reports. The book fittingly opens with a notice of the deceased physician; then come a number of medical and surgical papers. Ernest W. White contributes a good sketch of Puerperal Insanity. Mr. F. F. Burghard appears as a strong advocate of the injection of carbolic acid as a radical cure of hydroceles in children. After emptying the sac by means of a hypodermic needle, he injects through the same needle from 5 to 8 minims of concentrated carbolic acid. This procedure, he says, is not followed by pain or any other discomfort. Dr. R. Crawford contributes a thoughtful paper on the Emotional Origin of Graves's Disease, and Mr. Vernon Cargill on Eye Injuries.

Then come reports—the first being that on the Surgical Department of the Hospital, and careful notes are given of all the fatal cases—49 in number—that occurred in the hospital. Is not this full report of cases which did not recover a model for other surgical hospitals to follow? There

are also reports on the work done in the Medical and Obstetrical Wards, and the Anæsthetic and Pathological Departments.

A new ophthalmological theatre has been built in memory of Sir G. Johnson ; it is described with plans and woodcuts.

The volume as a whole is first-class, and worthy of the hospital from which it comes.

The Nervous Affections of the Hand, and other Clinical Studies. By GEORGE VIVIAN POORE, M.D., F.R.C.P.; Physician to University College Hospital; Professor of Clinical Medicine and of Medical Jurisprudence, University College, London; Consulting Physician to the Royal Infirmary for Women and Children; Physician to the Cheyne Hospital for Incurable Children, &c. London: Smith, Elder & Co. 1897. Pp. 308.

THIS is a valuable and interesting book, and we derived both profit and pleasure from its perusal. Dr. Poore has been for many years known as one of our best authorities on that group of diseases sometimes called "Occupation-Neuroses." From time to time he has delivered lectures or published articles on these affections. These papers are now collected, and form the most important part of the volume before us. They, and indeed all the essays in this volume, show evidence of thoroughness—wide experience, careful examination of other writers' works, and deep thought and consideration upon each case reported.

The first chapter contains the Bradshawe Lecture for 1881 on Nervous Affections of the Hand; the second is a careful and exhaustive study of Writers' Cramp. Of this, slight neuritis, as evidenced by some tenderness over the nerves, is much the most common cause. Many other causes also exist—as slight hemiplegia, congenital left-handedness, various chronic affections of the central nervous system, &c. In the ordinary form, due to neuritis, Dr. Poore applies blisters until the tenderness is removed, and then (and not till then) uses massage, and the continuous electric current, during the application of which the patient makes various voluntary movements with the affected muscles. To illustrate his

paper he gives a *résumé* of about 200 cases he has seen; these are arranged in groups according to the cause and pathology of the trouble in each case. Some of the cases are reported at length, details of the symptoms and treatment being given, so that the whole forms a most valuable treatise. The third and fourth Lectures are concerned with similar subjects—Tailors', Hammermen's, Pianists' Cramp.

These sections, forming about half the work, are its most important part, as forming together one homogeneous whole. The other lectures refer to a variety of subjects, but are valuable from the care and thoroughness which they display. Four are on different kinds of poisonings—by food, lead, phosphorus, and a case of auto-intoxication. Dr. Poore seems to believe that cases, described as acute yellow atrophy, may be caused by phosphorus; at any rate he gives good reasons for believing that there is some connection between these conditions.

There is an interesting lecture on Albuminuria in relation to Life Insurance. Dr. Poore thinks that the number of cases of kidney disease is increasing at the present day.

There are lectures on Gout, Heart Disease, Tuberculosis, and other subjects which will well repay perusal.

In all he writes Dr. Poore is thoughtful and suggestive. We can warmly recommend this work to the notice of our readers.

A System of Medicine by many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., F.R.C.P., F.R.S., F.L.S., F.S.A.; Regius Professor of Physic in the University of Cambridge; Fellow of Gonville and Caius College. Volume III. London: Macmillan & Co. 1897. 8vo. Pp. 1001.

WITH commendable expedition the Editor has issued the third volume of this able and comprehensive System of Medicine. We should perhaps say the fourth volume, for the second instalment of the work was "A System of Gynæcology."

The contents of the present volume are general diseases of obscure causation, diseases of alimentation and excretion,

diseases of the stomach, peritoneum and bowels, with interesting descriptions of sub-phrenic abscess and of diaphragmatic hernia by Dr. W. Lee Dickinson, Assistant Physician to Saint George's Hospital; a discussion of abdominal diagnosis from a gynæcological standpoint by Dr. W. S. Playfair, and an article on enteroptosis by Mr. Frederick Treves. The "dropping of the viscera" is, Mr. Treves thinks, an intelligible English equivalent for the names "enteroptosis," or "visceroptosis." Unfortunately he does not hesitate to adopt the latter barbarous hybrid—the correct term is of course "splachnoptosis," or perhaps more accurately "coeliptosis"—*τὰ σπλάγχνα* properly signifying the thoracic and not the abdominal viscera. General ptosis of the latter was first fully described by Glénard in 1885, and the condition with its attendant symptoms is now known as Glénard's Disease. Mr. Treves gives a very graphic account of the affection which is an undoubted morbid entity.

What will our friend Dr. T. J. MacLagan say when he finds "Acute Rheumatism, or Rheumatic Fever" placed in the very forefront of general diseases "of obscure causation?" Certainly Dr. W. S. Church's definition of acute rheumatism strikes us as inadequate and unsatisfactory. "In this article," he writes, "acute rheumatism will be considered as equivalent to a synovitis accompanied by pyrexia, and generally multiple." Surely the disease is much more than this. What about the profuse sweating, the heart and pericardial lesions, the skin eruptions, the subcutaneous nodules (beautifully illustrated in a subsequent article on the acute rheumatism of childhood by Dr. W. B. Cheadle), the complications and sequelæ of a disease which haunts particular houses in such a way as to lend support to a theory that it is infectious? Happily we need not appraise the value of Dr. Church's excellent article on acute rheumatism by the faultiness of his definition of the malady. As regards the ætiology of acute rheumatism, the author adopts no theory, while admitting that much may be said in favour of its being an infective disease. We are disposed to agree with Dr. Church in the opinion that the peculiar sour smell of the sweat in acute rheumatism is due to fermentative changes which take place in the perspiration after it is poured out.

The use of willow bark, its active principle, salicin, and the salicylates in the treatment of the disease is of course admitted by the author, but he really seems to have been at some pains to suppress the name of Dr. T. J. Maclagan in connection with this particular subject, although he quotes him elsewhere in the article.

In this part of the volume there are very full accounts of rickets by Dr. Cheadle; gout, by Sir William Roberts, who advises gouty patients to restrict their use of sodium chloride as a condiment, and to substitute for it, as far as practicable, the use of potassium chloride; diabetes mellitus, by Dr. Robert Saundby, who also revised the following article on diabetes insipidus, by the late Dr. Charles Henry Ralfe; and lardaceous disease, by Dr. Howship Dickinson.

There is room for question whether an interesting article on shock and collapse, by Dr. Louis Cobbett, the John Lucas Walker student of Pathology in the University of Cambridge, should find a place, as it does, in the section devoted to diseases of Alimentation and Excretion. Equally open to question is the grouping of sea-sickness and of "Mountain Sickness" with diseases of the stomach. The two contributions just mentioned are excellent—that on sea-sickness is written by Dr. J. R. Stocker, Medical Officer, Board of Trade, Glasgow; that on mountain-sickness is from the pen of the editor himself, who apologetically explains that, never having ascended higher than Mont Blanc, he was long disposed to disbelieve in any such malady, regarding the state rather as a compound made up of fatigue, dyspepsia, and heart failure. The experience of climbers—such as Sir Martin Conway, Mr. Whymper, and others—at far higher altitudes is, however, conclusive that there is a definite disorder thus designated, and that it makes its appearance in all persons who have climbed to a certain altitude—about 16,500 feet.

Among the remaining notable communications in this volume we can mention only a few. Neuroses of the stomach have been done by the editor, who also describes dilatation of this organ. Dr. Julius Dreshfield writes on ulceration of the stomach and also of the duodenum; Dr. W. Hale White on tumours of the stomach. There is an excellent article on diarrhœa by Dr. Lauder Brunton, followed by an equally

good one on diarrhœas of children by Dr. Eustace Smith. Diseases of the peritoneum are ably dealt with by Dr. Allchin, and Mr. Frederick Treves. The latter also writes on intestinal obstruction and perityphlitis. A practical, but short section on the differential diagnosis of diseases of the anus and rectum, by Dr. Herbert Wm. Allingham, brings the volume to a close.

There are wonderfully few misprints or printers' errors. In addition to the few corrected on page xiii., we noticed some German proper names misspelled—for example, Kulz for Külz (page 3), Reiss for Riess (page 37), Zeigler for Ziegler (page 277). These few and trifling blemishes do not detract from the literary and scientific value of the book, which is worthy of the instalments of the system of medicine which have preceded it.

Food in Health and Disease. By I. BURNEY YEO, M.D., F.R.C.P. New and Revised Edition. London: Cassell & Co. 1896. Demy 8vo. Pp. 592.

THE practitioner who gives a proper place to the study of dietetics will welcome a new and revised edition of Dr. Burney Yeo's excellent work on "*Food in Health and Disease.*" Two important chapters have been included in the new volume which had no place in the first edition—viz., Diet in Affections of the Circulatory and Respiratory Organs; and Food in Acute and Chronic Rheumatism, Rheumatoid Arthritis, in Skin Diseases, in Insanity, and certain other Affections of the Nervous System.

In acute rheumatism three or four pints of diluted milk, to which have been added sodium bicarbonate and common salt, are recommended as the daily dietary, and, in addition, barley water and thin oatmeal gruel may be taken; but all meat extracts or animal broths are condemned during the febrile stage. Pastry, sweets, and fermented drinks are prohibited even during convalescence. In chronic rheumatism only light, nutritious and readily-digested food should be allowed, whereas in rheumatoid arthritis a generous diet is necessary. In skin diseases where dyspeptic conditions exist these must

be treated accordingly, but "in parasitic skin affections dietetic treatment is utterly useless."

Minute instructions are given as to the "forcible feeding" of the insane by means of the oesophageal tube, and the advantages of mouth over nasal feeding are detailed.

To Appendix I., which contained a list of hospital dietaries, is now added Appendix II., which contains a lucid account of the means by which milk is sterilised and Pasteurised.

"Perfect sterilisation can only be effected by submitting the milk to the action of continuous steaming for two hours at a temperature of 248° F., or for 30 minutes at a temperature of 266° F., but this produces changes in the milk which are not desirable"—changes which render this important article of diet more indigestible, and therefore less useful as a food for infants. For this reason resort is had to Pasteurisation, in which the milk is exposed to the comparatively low temperature of 140° to 147° F. By this method the milk is more agreeable to the taste, and more easily digested; but, on the other hand, all the bacterial spores are not killed, fermentation is only temporarily checked, and the tubercle bacillus is not destroyed. So that where the latter bacillus is suspected recourse must be had to boiling. Cathcart's method of sterilising milk, described as the cheapest and least troublesome, is detailed at length.

We recommend Mr. Yeo's book to all conscientious practitioners, not one of whom will consult its pages without deriving therefrom information on dietetics which he will find no less useful than a knowledge of the drugs by which he hopes to alleviate suffering and combat disease.

Bazar Medicines and Common Medical Plants of India.

By EDWARD JOHN WARING, C.I.E., M.D. Fifth Edition.

London: J. & A. Churchill. 1897. Crown 8vo. Pp. 292.

THE fact that this little volume has reached its fifth edition is a strong guarantee that its existence is justified. Its function is plainly set out by the author:—"As a guidance to our Indian fellow-subjects, and particularly to those to whom the trained medical practitioner is unable to extend his fostering care."

The contents of the book are the introduction, which gives an expedient, in the absence of proper weights, to deduce them from the weight of a rupee, which weighs 180 grains, &c.

Part I. contains the names of some 80 drugs that are sold in the Indian bazaars, with their botanical names and therapeutic uses. It might be suggested from the nature of the work, "the appearance and physical properties of the drugs," as they are to be used by people who are not qualified medical men, should be given.

Part II. is a synopsis of diseases, with special reference to their treatment by the remedies mentioned in Part I. We may here give the remark of a Surgeon-Major in the Indian Army, that there is "no text-book that gives the detailed treatment of chronic dysentery in the English language."

Appendix A gives directions for restoring the apparently dead from drowning. Appendix B contains a summary of treatment of persons bitten by venomous snakes; we would rather die than undergo the shocking treatment that the author describes, and hope that the light of modern science will soon flow in on this dark scene of medical horror. The precautions against getting bitten are sensible and valuable. Appendix C describes a method of treating small-pox by carbolised oil. Appendix D is devoted to the clinical thermometer. Appendix E includes a list of apparatus.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections. Edited and annotated by J. J. PRINGLE, M.B., F.R.C.P.; Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London. Parts X. and XI. London: The Rebman Publishing Co., Ltd. 1897.

WE have so often spoken in terms of praise of this splendid work that little more is required of us than to record the well-nigh simultaneous publication of the tenth and eleventh parts of the Atlas.

The tenth fasciculus contains four plates of photo-lithochromes, with the accompanying explanatory letterpress. Of the plates, the first illustrates a type of polymorphous eruption which often occurs in secondary syphilis. The

model from which the photo-lithochrome was taken was made by Baretta, in 1893, from a patient under the care of Professor Fournier in the St. Louis Hospital, Paris. The polymorphous syphilides represented show a predominance of lichenoid and miliary forms. The second plate represents a model of Paget's disease of the nipple, made by Baretta in 1886 from a patient under M. Vidal's care in the St. Louis Hospital. The case is described at length by M. J. Darier. In the third plate there is contained a beautiful illustration of trophic ulcers of the hand and forearm in a workman who was injured by the bursting of the tube of a copper steam engine on March 11th, 1892. He was treated by M. Quinquaud in the St. Louis Hospital. The lesions represented in the photo-lithochrome made their appearance some eleven months after the primary injury. The case is described by M. Lucien Jacquet. The fourth plate contains pictures of a series of syphilitic chancres affecting the face and breast. The descriptive letterpress is from the pen of Professor Alfred Fournier, Physician to the St. Louis Hospital.

The eleventh fasciculus is a very interesting one, presenting much variety in its contents. It contains five plates. The first shows hidroic erythema of the hands and lips in a patient under the care of M. R. du Castel, in the St. Louis Hospital in 1893. He was a young man of twenty-seven, of robust constitution, without any noteworthy hereditary antecedents or syphilitic history. The lesions shown on the back of the hand present, in the most perfect manner, the characteristics of Bazin's "*Hydroa vesiculosum*"—the "*Erythema multiforme*" of M. Besnier—"Erythema iris" or "*en cocarde*"—the "*Herpes iris*" of Bateman. By the way, there is a twofold error in Bazin's name for this skin affection. First, the Greek word is *ἱδρῶα* or *ἱδρῶα*, not *ὑδρῶα*. Next, *ἱδρῶα* is a neuter plural, so that the qualifying adjective should be "*vesiculosa*," not "*vesiculosum*." The two following photo-lithochromes are described by M. Georges Baudouin. Of these, the first shows a good example of the pigmented or freckled syphilide which locates itself most frequently upon the neck. It is the "*granular syphilide*" of Monneret and Hardy, but Pilon in his Thesis on the syphilitic exanthemata (in 1857) gave it the name which it has since borne—*pigmented* or *freckled syphilide*.

"Molluscum contagiosum" (Bateman) in a syphilitic subject is shown in the other plate described by M. Baudouin. M. Ernest Gaucher demonstrates an illustration of vascular nævus verrucosus of the leg which was modelled by Baretta in 1894 from a patient under M. Gaucher's care at the Saint Antoine Hospital.

The last illustration in the eleventh fasciculus is a remarkable example of *Pediculosis vestimentorum* with pigmentation. The model was made by Baretta in the present year (1897) from a patient under the care of M. Ernest Besnier. "Maculæ cæruleæ," or "taches bleuâtres," are well shown in the plate, constituting the appearance now known as *parasitic melanoderma*.

The parts of the Atlas we have been discussing are exquisite specimens as well of printing as of the photo-lithochromic art. They reflect equal credit on the editor and on the publishers. Their artistic perfection make us all the more regret a rumour which has reached us to the effect that the work is nearly complete.

Archives of the Roentgen Ray. Edited by W. S. HEDLEY, M.D., and SYDNEY ROWLAND, M.A., M.R.C.S. London: The Rebman Publishing Company, Limited. July, 1897. Folio. Pp. 20. Vol. II. No. 1.

THIS is our old friend—if we can speak of a periodical aged one year as "old"—the "Archives of Clinical Skiagraphy" slightly modified in form and considerably increased in size.

The editors tell us that the more comprehensive title indicates the wider field this journal is intended to cover in the present and future. It "now appears as a quarterly record of all that appertains to the Roentgen ray. Whilst there was yet a possibility that the latter might prove to be something which had been observed before, it was modestly called by its discoverer the 'X-ray.' This name seems the less appropriate now that it is known to be Roentgen's ray; and there is a fitness in naming it so—if for nothing else than 'the perpetuation of testimony.'"

It will interest our readers to learn that there is now a Roentgen Society with all its paraphernalia of President, Vice-Presidents, Council, Treasurer, Secretary, and one Honorary Member—Professor Roentgen himself. The

President is Professor Silvanus P. Thompson, D.Sc., F.R.S. The Society held its first General Meeting on June 3rd, 1897 in the rooms of the London Medical Society, Chandos-street, when "laws" were passed, members enrolled, and officers elected. The first object of the Society is "to discuss the Roentgen rays in their relation to medicine, the Arts and Sciences." Why should not "Medicine" have a capital M? The second object is "to discuss and exhibit apparatus and methods in connection with the rays." Then meetings are to be held periodically; a museum, library, and Roentgen ray appliances are to be provided; and transactions are to be published in a convenient form.

The present number of the "Archives" is well got up, and its contents are varied and instructive. The President's erudite article on the nature of Roentgen's rays is extremely interesting and clear. Dr. Hedley, one of the editors, also gives a survey, present and retrospective, on the rays. Then follows a description of the five plates which are included in the number. Probably the most interesting of the illustrations is an X-ray picture at one exposure of an entire adult body. This radiograph, with descriptive details, has also appeared in the New York *Electrical Engineer*. It was taken by Dr. William J. Morton, of that city. The apparatus employed was a twelve-inch induction coil, whose primary was supplied from the 117 volt Edison current of the street mains, and made and broken by means of a break wheel, causing about 5,000 breaks a minute. The time occupied, including stoppages, was thirty minutes. The woman was fully clothed, excepting as to corsets.

This number of the "Archives" like its predecessors has been artistically brought out by the publishers, on whom it reflects much credit.

Schedules for Plant Description. By JOHN WISHART.
Edinburgh: E. & S. Livingstone. 1897.

THESE schedules are very well arranged for field work, a well filled-in schedule of *Cheiranthus Cheiri* being used as an example. The use of these schedules by pupils will train their powers of observation and of reasoning, and prevent them from being contented with book knowledge.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

CLINICAL RECORD.

Case of Appendicitis complicated by Acute Peritonitis: Recovery.
By FREDERICK WARREN, L.R.C.P.I., L.R.C.S.I.

PATIENT, C. R., a lad aged fifteen years. Last Christmas the patient had an attack similar to the present one, only the symptoms were much less severe.

On the night of August 4th, 1897, C. R. went to bed apparently quite well, and slept well throughout the night. When he awoke next morning, about 8 30 a.m., he complained of pain in the lower part of his "stomach" (abdomen), and when asked to point where the pain was most severe, he at once put his fingers over the right iliac fossa; this region was also very tender to the touch. The point of maximal tenderness was at the junction of the middle and inner thirds of a line drawn from the right anterior superior spine of the ilium to the umbilicus (M'Birney's spot). This extremely tender area was very small—it could be covered by a shilling piece. When I made gentle pressure at various points with the tip of my index finger over the painful region, and then came on this spot, the patient invariably complained of great pain. The abdomen was not distended. He also complained of nausea. A couple of hours after the onset of his illness he began to vomit, at first the contents of the stomach, and afterwards bile. There was no tumour or fulness in the right iliac fossa. The patient was constipated, but passed some flatus per anum. On examination per anum the rectum was empty; tongue was thickly furred; temperature, 102°; pulse, 120; respiration, 22.

On the 6th, at 8 30 p.m. (thirty-six hours from onset of illness), the patient was suddenly seized with agonising pain in the abdomen, which was not localised, but was diffused all over the cavity. The tenderness, which was limited to the right iliac fossa, had now become diffused all over the abdomen, and was most intense; the patient would not let one touch him at all. Both legs were drawn

up in bed. He now began to vomit again. Micturition and the passage of flatus per anum were both very painful. The abdominal muscles were very rigid. Liver dulness normal; temperature, 102°; pulse, 126.

Urine—High coloured; acid in reaction; specific gravity, 1020; contains a small quantity of albumen.

On the tenth day of his illness the temperature was normal, and the patient felt quite well; but on the fourteenth day his temperature went up to 100°, and his pulse to 90. This rise in temperature I attributed to constipation; he was two and a half days without having passed a motion. I gave soap and water enemata, but they did no good. I then administered 10 ozs. of warm olive oil as an enema, which was retained, and repeated this in twelve hours; this acted splendidly; the patient passed a large motion, and the temperature came down to normal after it.

Treatment consisted of—diet, milk and soda water in small quantities frequently; opium internally; hot fomentations externally; enemata of warm olive oil.

Points of interest in this case are:—

1. Its very sudden onset.
2. The onset of acute peritonitis in thirty-six hours.
3. The point of maximal intensity of pain and tenderness (M'Birney's spot) was so well marked.
4. No tumour or fulness could at any time be made out in the right iliac fossa.
5. The benefit derived from the enemata of warm olive oil.

APPENDICITIS AND THE BERRY CROP.

THE seed theory of appendicitis has become so widespread among the laity that it is said to have interfered very seriously with the sale of small fruits this season. The result is that the unsuperstitious and the "appendicised" are enjoying an abundance of the healthful berries, to the scandal of their timid neighbours.

A MAN OF WEIGHT.

UNDER the heading "*Enterrement d'un homme de poids*" the *Gazette Médicale de Paris* reports the interment of a butcher at Mondeville, near Caen, who weighed 251 kilograms—over 553 lbs., more than 39½ stone. The coffin was 2 metres long, 1·05 m. high, and 85 centimetres in breadth. We are not surprised to hear that "*cette cérémonie a vivement impressionné toutes les personnes qui assistaient aux obsèques de M. Brisollier.*"

MEDICAL EDUCATION AND EXAMINATIONS IN IRELAND.

1897-1898.

MEDICAL students in Ireland, as elsewhere, have in the first instance to choose between University Degrees and Non-University Qualifications or Diplomas. Should they elect to try for an University Degree, their choice must lie between the University of Dublin, which requires a Degree in Arts before registrable Degrees in Medicine, Surgery, and Midwifery are conferred, and the Royal University of Ireland, which—while not requiring a full Arts Degree—yet rightly insists on a liberal education in Arts, tested by more than one searching examination in the same, before a candidate graduates in the three branches of medicine already mentioned—Medicine, Surgery, and Midwifery.

Outside the Universities, the chief Licensing Bodies are the Royal Colleges of Physicians and Surgeons. The Conjoint Examination Scheme between the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Dublin has ceased to exist. The position of the latter body as a Licensing Corporation under the Medical Act of 1886 has been defined by the appointment of Examiners in Surgery by the General Medical Council at the bidding of Her Majesty's Privy Council. The Royal Colleges are in a position to give a first-class working qualification in Medicine, Surgery, and Midwifery—a qualification which is registrable under the Medical Acts, which is universally recognised as one of high merit, and the possession of which is attended by no disabilities, such as preventing its possessor from dispensing medicines or keeping open shop for the sale of medicines if he is legally qualified to do so.

The Medical Schools in Ireland are—(1.) The School of Physic in Ireland, Trinity College, Dublin; (2.) The Schools of Surgery of the Royal College of Surgeons in Ireland (including the Carmichael College of Medicine and the Ledwich School of Medicine); (3.) The Catholic University Medical School, Cecilia-street, Dublin; (4.) The School of

Medicine, Queen's College, Belfast; (5.) The School of Medicine, Queen's College, Cork; and (6.) The School of Medicine, Queen's College, Galway.

Facilities for Clinical Instruction in fully-equipped Medico-Chirurgical Hospitals exist in Dublin, Belfast, Cork, and Galway; but, as a rule, the Schools of Medicine in Ireland are not attached to a given hospital, or *vice versâ*, as is the case in London and other large centres of medical education. The student will, however, have little difficulty in selecting a hospital in the wards of which he will receive excellent bedside teaching, and have ample opportunity of making himself familiar with the aspect and treatment of disease.

The detailed information which follows is authentic, being taken directly from the published calendars of the respective licensing bodies.

REGULATIONS PRESCRIBED BY THE GENERAL MEDICAL COUNCIL.

With regard to the course of Study and Examinations which persons desirous of qualifying for the Medical Profession shall go through in order that they may become possessed of the requisite knowledge and skill for the efficient practice of the Profession, the General Medical Council have resolved that the following conditions ought to be enforced without exception on *all* who commence their Medical Studies at any time after Jan. 1, 1892:—

(a.) With the exception provided below, the period of Professional Studies, between the date of registration as a medical student and the date of Final Examination for any Diploma which entitles its bearer to be registered under the *Medical Acts*, must be a period of *bonâ fide* study during not less than five years.

(b.) In every course of Professional study and Examinations, the following subjects must be contained:—

- (I.) Physics, including the Elementary Mechanics of Solids and Fluids, and the rudiments of Heat, Light, and Electricity.
- (II.) Chemistry, including the principles of the Science, and the details which bear on the study of Medicine.
- (III.) Elementary Biology.
- (IV.) Anatomy.
- (V.) Physiology.
- (VI.) *Materia Medica* and Pharmacy.
- (VII.) Pathology.
- (VIII.) Therapeutics.

(IX.) Medicine, including Medical Anatomy and Clinical Medicine.

(X.) Surgery, including Surgical Anatomy and Clinical Surgery.

(XI.) Midwifery, including Diseases peculiar to Women and New-born Children.

(XII.) Theory and Practice of Vaccination.

(XIII.) Forensic Medicine.

(XIV.) Hygiene.

(XV.) Mental Disease.

The first four of the five years of Medical Study should be passed at a School or Schools of Medicine recognised by any of the Licensing Bodies, provided that the First Year may be passed at a University, or Teaching Institution recognised by any of the Licensing Bodies, where the subjects of Physics, Chemistry, and Biology are taught.

A student who has, previous to registration, attended a course or courses of study in one or all of the subjects, Physics, Chemistry, or Biology, in any University, School of Medicine, or Teaching Institution recognised by any of the Licensing Bodies, may without further attendance be admitted to examination in these subjects: provided always that such course or courses shall not be held to constitute any part of the five years' course of professional study.

The exception referred to above in (a) is as follows:—

Graduates in Arts or Science of any University recognised by the General Medical Council who shall have spent a year in the study of Physics, Chemistry, and Biology, and have passed an Examination in these subjects for the Degrees in question, are held to have completed the first of the five years of Medical Study.

The Examinations in the Elements of Physics, Chemistry, and Biology should be passed before the beginning of the Second Winter Session.

I.

UNIVERSITY OF DUBLIN.

DEGREES AND DIPLOMAS IN MEDICINE, SURGERY, AND MIDWIFERY.

The Degrees and Diplomas in Medicine, Surgery, and Midwifery granted by the University are as follows:—

The Degrees are:—

1. Bachelor in Medicine.
2. Bachelor in Surgery.
3. Bachelor in Obstetric Science.
4. Doctor in Medicine.
5. Master in Surgery.
6. Master in Obstetric Science.

The Diplomas are :—

1. Diploma in Medicine.
2. Diploma in Surgery.
3. Diploma in Obstetric Science.

Besides these Degrees and Diplomas, the University also grants a—

Qualification in State Medicine.

REGULATIONS FOR STUDENTS WHO MATRICULATED ON OR BEFORE 25TH NOVEMBER, 1891.

The following conditions must be fulfilled in order to qualify for the Degrees in Medicine (M.B.), Surgery (B.Ch.), and Midwifery (B.A.O.).

I. The Student must be of B.A. standing, and his name must be for at least four (Academic) years on the Books of the Medical School, reckoned from the date of his Matriculation. He may carry on his Arts Course concurrently with the Medical Course, and he need not have taken his B.A. before presenting himself for his Medical Degrees Examinations, but he cannot have the Medical Degrees conferred without the Arts Degree.

II. The following Courses must have been attended :—

[NOTE.—The Courses marked (*) must have been taken out before the Student can present himself for *any* of the Degree Examinations. In addition the Courses marked thus (†) must have been taken out before he can present himself for B.A.O., and the Courses marked thus (‡) before he can present himself for B.Ch.]

1. LECTURES.

WINTER COURSES.

* <i>Systematic Anatomy.</i>	* <i>Chemistry.</i>
* <i>Practical Anatomy (with Dissections), 1st year.</i>	‡ <i>Surgery.</i>
‡ <i>Practical Anatomy (with Dissections), 2nd year.</i>	* <i>Physiology.</i>
‡ <i>Applied Anatomy (with Dissections).</i>	* <i>Practice of Medicine.</i>
	‡ <i>Midwifery.</i>

SUMMER COURSES.

* <i>Practical Chemistry.</i>	* <i>Materia Medica.</i>
* <i>Practical Histology.</i>	* <i>Medical Jurisprudence and Hygiene.</i>
* <i>Botany.</i>	‡ <i>Operative Surgery.</i>
* <i>Zoology.</i>	

TERM COURSES.

**Physics.*—Michaelmas and Hilary Terms.

***2. HOSPITAL ATTENDANCE.**

1. Three Courses of nine months' attendance on the Clinical Lectures of Sir Patrick Dun's or other Metropolitan Hospital recognised by the Board of Trinity College.

Students who shall have diligently attended the practice of a recognised London or Edinburgh Hospital for one year, of a recognised County Infirmary, or of a recognised Colonial Hospital for two years previous to the commencement of their Metropolitan Medical Studies, may be allowed, on special application to the Board of Trinity College, to count the period so spent as equivalent to one year spent in a recognised Metropolitan Hospital.

***3. PRACTICAL VACCINATION.**

One month's instruction in Practical Vaccination to be attended at the Vaccine Department, Local Government Board for Ireland, 45 Upper Sackville-street; at No. 1 East Dispensary, 11 Emerald-street; or, until further notice, at the Grand Canal-street Dispensary.

***4. FEVER CASES.**

A Certificate of personal attendance on not less than five cases of Fever, with names and dates of the cases.

†5. PRACTICAL MIDWIFERY.

A Certificate of attendance on a six months' Course of Practical Midwifery with Clinical Lectures, including not less than thirty cases.

†6. OPHTHALMIC SURGERY.

A Certificate of attendance on a three months' Course of Ophthalmic Surgery.

III. The following Examinations must be passed:—

A.—The Previous Medical or Half M.B. Examination.

B.—The Degree Examinations.

A.—PREVIOUS MEDICAL EXAMINATION.

This Examination is divided into—

1. Physics and Chemistry.

2. Botany and Zoology.

3. Anatomy and Institutes of Medicine (Practical Histology and Physiology).

The Examination in Anatomy includes examination on the dead subject.

Before presenting himself for examination in any of the subjects the Student must have obtained credit for the corresponding Courses of Lectures and Practical Instruction.

It is not necessary that the Student should pass in all these subjects at the same examination; he is allowed to present himself for examination in as many, or as few of them as he pleases.

A Candidate rejected at the May Examination will not be allowed to present himself for examination *in the same subjects* at the June examination.

Candidates who fail in any part of the Examination are liable to be excluded from further examination *in the same subjects*, for a period not exceeding six months, if, in the opinion of the Examiners, they have given evidence of careless preparation.

Any Student who has obtained a Moderatorship in Natural Science, or a First Honor in Natural Science in both his junior and Senior Sophister years, and has credit for attendance at not less than thirty Lectures in Botany and Zoology in his Sophister years, may present himself at the Previous Medical Examination in these subjects.

Examinations will be held on Nov. 8, Jan. 24, May 23, June 23, June 27, and following days. Notice must be given to the Registrar of the School of Physic between Nov. 1 and 5; Jan. 17 and 21; May 16 and 20; June 16 and 21; June 20 and 24, respectively.

No Candidate will be allowed in for any Examination unless he has given notice within the days specified.

B.—DEGREE EXAMINATIONS.

There are three Degree Examinations, the B.A.O., the B.Ch., and the M.B. These may be taken in any order, provided that the requisite conditions have been fulfilled, and the Previous Medical Examination passed in all subjects.

1.—*Bachelor in Obstetric Science (B.A.O.).*

The Candidate must lodge with the Registrar of the School of Physic his Certificate of attendance on Practical Midwifery. He must also produce his Certificates of attendance on Hospital, Fever, and Vaccination, unless these have been already produced.

The Candidate is then required to pass an Examination in the following subjects:—

1. Practice of Midwifery.
2. Gynæcology.
3. Obstetrical Anatomy.

Fee for the Degree of Bachelor in Obstetric Science, £1. There is no *Licent* Fee.

Examinations will be held on Nov. 15, Jan. 31, May 31, and following days. Notice must be given to the Registrar of the

School of Physic between Nov. 8 and 12; Jan. 24 and 28; May 23 and 27, respectively.

No Candidate will be allowed in for any Examination unless he has given notice within the days specified.

2.—Bachelor in Surgery (B.Ch.).

The Candidate must lodge with the Registrar of the School of Physic his *Liceat* Fee and his Certificate of Attendance on a Course of Ophthalmic Surgery.

He must also produce his Certificates of Attendance on Hospital, Fever, and Vaccination, unless these have been already produced.

The Candidate is then required to pass an Examination in the following Subjects:—

- | | |
|--|------------------------|
| 1. Clinical Surgery. | 4. Surgical Anatomy. |
| 2. Operative Surgery (on the
dead subject). | 5. Surgical Pathology. |
| 3. Surgery. | 6. Ophthalmic Surgery. |

Fee for the *Liceat ad Examinandum*, £5.

Fee for the Degree of Bachelor in Surgery, £5.

Examinations will be held on Nov. 29, Feb. 14, June 13, and following days. Notice must be given to the Registrar of the School of Physic between November 22 and 26; Feb. 7 and 12; June 6 and 10, respectively.

No Candidate will be allowed in for any Examination unless he has given notice within the days specified.

3.—Bachelor in Medicine (M.B.).

The Candidate must lodge with the Registrar of the School of Physic his *Liceat* Fee, together with Certificates of Attendance on Hospital, Vaccination and Fever, unless these have been already produced.

The Candidate is then required to pass an Examination in the following subjects:—

- | | |
|--------------------------|--|
| 1. Clinical Medicine. | 5. Medical Anatomy. |
| 2. Practice of Medicine. | 6. Medical Jurisprudence and
Hygiene. |
| 3. Therapeutics. | |
| 4. Pathology. | |

Fee for the *Liceat ad Examinandum*, £5.

Fee for the Degree of Bachelor in Medicine, £11.

Examinations will be held on Nov. 22, Feb. 7, June 6, and following days. Notice must be given to the Registrar of the School of Physic between Nov. 15 and 19; Jan. 31 and Feb. 4; May 30 and June 3, respectively.

Graduates in Arts of Dublin, Oxford, or Cambridge, whose names have been in the Medical Register for five years or upwards are exempted from the Previous Medical Examination and from the written part of the M.B. Examination.

No Candidate will be allowed in for any Examination unless he has given notice within the days specified.

The following Degrees are also conferred by the University:—

4.—*Master in Obstetric Science.*

A Master in Obstetric Science must have passed the M.B. and B.Ch. Examinations, and produce a Certificate of having attended a Summer Course in Obstetric Medicine and Surgery.^a

He is then required to pass an Examination in the following subjects:—

- | | | |
|---------------------------|--|---|
| 1. Practice of Midwifery. | | 3. Anatomy of Female Pelvis &
Elementary Embryology. |
| 2. Gynæcology. | | 4. Clinical Gynæcology. |

Fee for the Degree of Master in Obstetric Science, £5.

Notice should be given to the Registrar of the School of Physic a week before the first day of the Examination. The dates are the same as those for the B.A.O.

5.—*Master in Surgery.*

A Master in Surgery must be a Bachelor in Surgery of the University of Dublin, of not less than three years' standing, and must produce satisfactory evidence of having been engaged for not less than two years from the date of his Registration in the study or practice of his profession. He must then pass an Examination in the following subjects:—

- | | | |
|------------------------|--|---|
| 1. Clinical Surgery. | \| | 4. Surgery. |
| 2. Operative Surgery. | | 5. Surgical Anatomy (on
the dead subject). |
| 3. Surgical Pathology. | | |

And one of the following optional subjects, viz:—

1. Surgery, in one of its recognised branches, viz:—
Ophthalmic and Aural; Gynæcological; Dental.
2. Mental Disease.
3. Medical Jurisprudence and Hygiene.
4. Advanced Anatomy and Physiology.
5. Comparative Anatomy.

^a Existing Graduates in Medicine of the standing of M.D. are not required to attend this Course.

Graduates in Surgery of the University of Dublin, of not less than ten years' standing, may be recommended for the Degree of M.Ch., by the vote of the Court of Examiners, on such Examination as they shall determine. Candidates claiming this privilege must give one month's notice to the Registrar of the School, state in full their qualifications, and name the optional subject selected.

Fee for the Degree of Master in Surgery, £11.

Notice should be given to the Registrar of the School of Physic a week before the Examination begins, the optional subject selected being named at the same time. The dates are the same as those for the B.Ch.

6.—*Doctor in Medicine.*

A Doctor in Medicine must be a Bachelor in Medicine of three years' standing, or have been qualified to take the Degree of Bachelor in Medicine for three years. He must also read a Thesis publicly before the Regius Professor of Physic, or must undergo an Examination before the Regius Professor of Physic, according to Regulations to be approved by the Provost and Senior Fellows. The Regius Professor as a rule appoints 12 o'clock on the day before Commencements for hearing Theses.

Commencements will be held on Dec. 17, Feb. 22, April 21, June 30.

Fee for the Degree of Doctor in Medicine, £13.

UNIVERSITY DIPLOMAS.

Candidates for the Diplomas in Medicine, Surgery, and Obstetric Science must be matriculated in Medicine, and must have completed two years in Arts, and five years in Medical Studies.

The dates, regulations, and subjects of Examination are the same as for the Degrees, except that it is not necessary to attend the Courses of Lectures in Botany and Zoology, or to pass the Previous Medical Examination in these subjects.

A Diplomate on completing his Course in Arts, and proceeding to the Degree of B.A. may become a Bachelor, by attending the Lectures on Botany and Zoology, passing the Previous Medical Examination in those subjects, and paying the Degree Fees.

The *Liceat* fees are the same as for the Degrees.

The Fees for the Diplomas are—Medicine, £5; Surgery, £5; Obstetric Science, £1.

Each Candidate who has completed the prescribed Courses of study and passed the requisite qualifying Examinations in Medicine, Surgery, and Midwifery, will be entitled, if a

Graduate in Arts, to have conferred on him the Degrees of M.B., B.Ch., B.A.O., on payment to the Senior Proctor of the Degree Fees amounting to £17. A corresponding regulation applies to the Diplomas, the Fees for which are £11. He will also obtain from the Senior Proctor a Diploma, entitling him to be entered on the Register of Medical Practitioners under the Medical Act, 1886.

REGULATIONS FOR STUDENTS WHO MATRICULATED SINCE 1891.

The following conditions must be fulfilled in order to qualify for Degrees in Medicine (M.B.), Surgery (B.Ch.), and Midwifery (B.A.O.):—

I. The Student must be of B.A. standing, and his name must be for at least five (Academic) years on the Books of the Medical School, reckoned from the date of his Matriculation. He may carry on his Arts Course concurrently with his Medical Course, and he need not have taken his B.A. before presenting himself for his Final Medical Examination, but he cannot have the Medical Degrees conferred without the Arts Degree.

II. The following Courses must have been attended:—

[NOTE.—The Courses marked thus (*) must have been taken out before the Student can present himself for any part of the Final Examination. In addition, the Courses marked thus (†) must have been taken out before he can present himself for Section B; the Courses marked thus (‡) before he can present himself for Section C; and the Courses marked thus (§) before he can present himself for Sections D and E.

1. LECTURES.

WINTER COURSES.

* <i>Systematic Anatomy.</i>	* <i>Chemistry.</i>
* <i>Practical Anatomy (with Dissections), 1st year.</i>	† <i>Surgery.</i>
* <i>Practical Anatomy (with Dissections), 2nd year.</i>	* <i>Physiology (two Courses).</i>
* <i>Applied Anatomy (with Dissections).</i>	† <i>Practice of Medicine.</i>
	‡ <i>Midwifery.</i>
	† <i>Pathology.</i>

SUMMER COURSES.

* <i>Practical Chemistry.</i>	* <i>Materia Medica and Therapeutics.</i>
* <i>Practical Histology.</i>	† <i>Medical Jurisprudence and Hygiene.</i>
* <i>Botany.</i>	§ <i>Operative Surgery.</i>
* <i>Zoology.</i>	

TERM COURSES.

**Physics.*—Michaelmas, Hilary, and Trinity Terms.

§2. HOSPITAL ATTENDANCE.

1. Three Courses of nine months' attendance on the Clinical Lectures of Sir Patrick Dun's or other Metropolitan Hospital recognised by the Board of Trinity College.

Students who shall have diligently attended the practice of a recognised London or Edinburgh Hospital for one year, of a recognised County Infirmary, or of a recognised Colonial Hospital, for two years previous to the commencement of their Metropolitan Medical Studies, may be allowed, on special application to the Board of Trinity College, to count the period so spent as equivalent to one year spent in a recognised Metropolitan Hospital.

§3. PRACTICAL VACCINATION.

One month's instruction in Practical Vaccination to be attended at the Vaccine Department, Local Government Board for Ireland, 45 Upper Sackville-street; at No. 1 East Dispensary, 11 Emerald-street; or, until further notice, at the Grand Canal-street Dispensary.

§4. MENTAL DISEASE.

A Certificate of attendance on a six months' course of Practical Study of Mental Disease in a recognised Institution.

†5. PRACTICAL MIDWIFERY.

A Certificate of attendance on a six months' Course of Practical Midwifery with Clinical Lectures, including not less than thirty cases.

§6. OPHTHALMIC SURGERY.

A Certificate of attendance on a three months' Course of Ophthalmic Surgery.

III. The following Examinations must be passed:—

The Previous Medical or Half M.B. Examination.

The Final Examination.

The Previous Medical Examination must be passed in all its parts before any part of the Final can be entered for, except in the case of Candidates for Diplomas.

The Regulations and Dates for the Previous Medical Examination are the same as those specified on pages 319 and 320.

The Final Examination is arranged as follows:—

FIRST PART.

SECTION A.

Applied Anatomy (Medical and Surgical), paper.

Applied Physiology, *vivâ voce*.

Jurisprudence and Hygiene, paper and *vivâ voce*.

Examinations for Section A will be held on Nov. 15, Jan. 31, May 31, and following days. Notice must be given to the Registrar of the School of Physic between Nov. 8 and 12, Jan. 24 and 28, May 23 and 27, respectively.

SECTION B.

Materia Medica and Therapeutics, paper and *vivâ voce*.

Medicine, paper and *vivâ voce*.

Surgery, paper and *vivâ voce*.

Pathology, paper and *vivâ voce*.

Examinations for Section B will be held on Nov. 22, Feb. 7, June 6, and following days. Notice must be given to the Registrar of the School of Physic between Nov. 15 and 19, Jan. 31 and Feb. 4, May 30 and June 3, respectively.

Section A may be passed in any part of the Fourth Year, provided the corresponding Curriculum shall have been completed; Section B not before Trinity Term of the Fourth Year.

Section A must be passed before the Candidate can present himself for Examination in Section B. Both Sections must be passed at least one Term before the Candidate can present himself for Examination in Sections C, D, or E.

Fee for the *Liceat ad Examinandum* £5, to be paid when the Candidate enters for Section A.

No Candidate will be allowed in for any Examination unless he has given notice within the days specified.

SECOND PART.

SECTION C.

Midwifery, paper and *vivâ voce*.

Gynæcology, paper and *vivâ voce*.

Obstetrical Anatomy, paper.

Examinations for Section C will be held on Nov. 15, Jan. 31, May 31, and following days. Notice must be given to the Registrar of the School of Physic between Nov. 8 and 12, Jan. 24 and 28, May 23 and 27, respectively.

SECTION D.

Clinical Medicinæ.

Mental Disease.

Examinations for Section D will be held on Nov. 22, Feb. 7, June 6, and following days. Notice must be given to the Registrar of the School of Physic between Nov. 15 and 19, Jan. 31 and Feb. 4, May 30 and June 3, respectively.

SECTION E.

Clinical Surgery.

Operations.

Ophthalmic Surgery.

Examinations for Section E will be held on Nov. 29, Feb. 14, June 13, and following days. Notice must be given to the Registrar of the School of Physic between Nov. 22 and 26, Feb. 7 and 11, June 6 and 10, respectively.

One Section of the Second Part must be passed in Trinity Term of the Fifth Year, or subsequently. The other two may be passed in any Term of the Fifth Year, provided the corresponding Curriculum shall have been completed. Subject to this provision the Sections may be taken in any order.

Fee for the *Liceat ad Examinandum* £5, to be paid when the Candidate enters for the Section for which he first presents himself.

The Candidate must also produce Certificates of attendance at the Hospitals where the Courses prescribed for each Section are to be taken out.

No Candidate will be allowed in for any Examination unless he has given notice within the days specified.

QUALIFICATION IN STATE MEDICINE.

The Diploma in State Medicine is conferred, after examination, by the University of Dublin, upon Candidates fulfilling the following conditions:—

1. The Candidate must be a Doctor in Medicine, or Graduate in Medicine and Surgery, of Dublin, Oxford, or Cambridge.

2. The name of the Candidate must have been on the Medical Register at least twelve months before the Examination.

3. The Candidate must have completed, subsequent to Registration, six months in a Laboratory, recognised by the Provost and Senior Fellows, in practical instruction in Chemistry and Bacteriology applied to Public Health, and also have attended, practically, outdoor Sanitary work for six months, under an approved Officer of Health.^a

^a This condition does not apply to Practitioners registered, or entitled to be registered, on or before 1st January, 1890.

The Examination to be passed by the Candidate is prescribed as follows :—

EXAMINATION FOR DIPLOMA IN STATE MEDICINE.

STATE MEDICINE AND HYGIENE.—*Examination by Paper.*

Time, 2 hours.

CHEMISTRY.—*Examination by Paper, and in Laboratory.*

Time, 1½ hour each.

PHYSICS AND METEOROLOGY.—*Examination vivâ voce.*

ENGINEERING.—*Examination by Paper. Time, 1½ hour.*

SANITARY ENGINEERING.—*Practical Examination.*

MORBID ANATOMY.—*Examination vivâ voce.*

PRACTICAL BACTERIOLOGY.

EPIDEMIOLOGY AND WORK AND DUTIES OF A PUBLIC OFFICER OF HEALTH.

VITAL STATISTICS.—*Examination by Paper. Time, 1½ hour.*

MEDICAL JURISPRUDENCE.—*Examination vivâ voce.*

LAW.—*Examination by Paper. Time, 1½ hour.*

Candidates are required to send in their names to the Registrar of the School of Physic at least a week before the first day of Examination.

Candidates who have registered since January 1st, 1890, are required to apply to the Board of Trinity College for leave to present themselves a month before the Examination begins, and to submit at the same time Certificates of the required Courses of Study.

The Examination will begin on December 6th.

II.

ROYAL UNIVERSITY OF IRELAND.

COURSES FOR DEGREES IN MEDICINE, SURGERY, AND OBSTETRICS.

General Regulations.

The Course for these Degrees shall be of at least five Medical years' duration; but Graduates in Arts or Science who shall have spent a year in the study of Physics, Chemistry, and Biology, and have passed an Examination in these subjects for the Degrees in question, shall be held to have completed the first of the five years of Medical Study.

Students who commenced their Medical Studies after Jan. 1, 1892, must furnish evidence of having been registered by the Medical Council, as Students in Medicine, for at least 57 months,

before being admitted to the M.B., B.Ch., and B.A.O. Degrees Examination.

No one can be admitted to a Degree in Medicine who is not twenty-one years of age.

All Candidates for these Degrees, in addition to attending the lectures and complying with the other conditions to be from time to time prescribed, must pass the following Examinations:—

The Matriculation Examination.

The First University Examination.

The First Examination in Medicine.

The Second Examination in Medicine.

The Third Examination in Medicine.

The Examination for the M.B., B.Ch., B.A.O. Degrees.

The Course of Medical Studies shall be divided into five Periods of one Medical Year each.

When a Student has fully completed the Course of Medical Studies prescribed for any year, he may proceed with the studies assigned to the year next following, without passing the corresponding examination.

There shall be an interval of at least one Academical Year between the passing of one examination and the being admitted to the examination next subsequent. But the Senate may, under special circumstances, allow a Candidate to present himself for his following examination within a less interval.

The Senate may allow any Candidate who so desires to present himself for the Third Examination in Medicine, and for the Degrees Examination at the same Examination period, provided that an interval of three Medical years shall have elapsed from the time of passing the Second Examination in Medicine, and provided that such Candidate shall have completed the entire course of studies, &c., prescribed for the five years of the Medical curriculum.

Candidates shall furnish proper Certificates of attendance at the several Courses of Medical Instruction prescribed for the different years of the curriculum.

No such certificate will be received unless it attests a *bonâ fide* attendance at three-fourths of the whole Course. *Students are reminded that certificates of attendance at Night Lectures will not be accepted.*

No Certificates of instruction in any of the Courses of Medical Studies, in connection with either Lectures or Hospitals, can be received, unless issued by an Institution which has been formally recognised by the Senate.

The prescribed courses in Natural Philosophy, Chemistry, Biology, Anatomy and Physiology must be attended in Institutions provided with the appliances required for the performance by the Students of proper Experimental Courses and Practical Work in those subjects.

Where Certificates in a special department (Fever, Mental Diseases, Ophthalmology, &c.) are presented, they must be signed by the Physician or Surgeon in charge of such department.

MEDICAL CURRICULUM.

FIRST YEAR.

The First Year's course of Medical Studies consists of:—

(a.) Natural Philosophy, taught experimentally:—

Either a Six Months' Course with Lectures (illustrated experimentally) on at least three days in the week ;

Or, a Three Months' Course with Lectures (illustrated experimentally) on at least five days in the week.

(b.) Chemistry, a Six Months' Systematic Course.

(c.) Biology:—

Botany, a Three Months' Course, with Lectures and Demonstrations on at least three days in the week.

Zoology, a Three Months' Course, with Lectures and Demonstrations on at least three days in the week.

(d.) Anatomy, a Six Months' Systematic Course (Optional).

(e.) Practical Anatomy (Dissections), a Six Months' Course (Optional).

The Systematic Course in Anatomy and Dissections should enable the Student to acquire a good knowledge of the bones, joints, and muscles, and such knowledge of the vessels and viscera and of the larger nerves as he may reasonably be supposed to have acquired at this period of his Medical Studies.

(f.) Practical Chemistry, a Three Months' Course (Optional).

This attendance must not be simultaneous with attendance at the Systematic Course.

SECOND YEAR.

The studies assigned to the Second Year must not be entered upon until the completion of the course assigned to the First Year; that is, until the completion of such a course of study as would qualify a candidate for admission to the First Examination in Medicine.

The Second Year's course of Medical Studies consists of:—

- | | |
|---|--|
| (a.) Anatomy, a Six Months' Systematic Course; | } If not attended during the First Year. |
| (b.) Practical Anatomy (Dissections), a Six Months' Course; | |
| | |

Students who in the First Year have attended the courses of Anatomy prescribed for the Second Year, may in the Second Year attend the course of Anatomy prescribed for the Third Year.

- (c.) Practical Chemistry, a Three Months' Course (if not attended during the First Year).
 (d.) Physiology, a Six Months' Systematic Course.

The Systematic Course in Physiology should enable the Student to acquire a good knowledge of Physiological Chemistry, and of the following:—Development of tissues; the Physiology of muscle, nerve-fibres, and nerve-cells (but not of the brain and spinal cord); also, the Physiology of blood, lymph, and lymphoid organs, digestion, circulation, respiration, animal heat, secretion and excretion (including the functions of the skin and kidneys). The advanced portions of the subject—*e.g.*, Embryology, the Histology and Physiology of the central nervous system and of the organs of special sense, of voice, and of reproduction—are comprised in the Advanced Systematic Course of Physiology prescribed for the Third Year.

- (e.) Materia Medica, Pharmacology and Therapeutics, a Three Months' Course (Optional). This subject may be studied in either the Second or Third Year of Medical Studies; but it will be included in the subjects of the Third Examination in Medicine.
 (f.) Practical Physiology and Histology (Optional). A Three Months' Laboratory Course, of at least two hours three times a week. One-third at least of the time shall be devoted to Practical Physiology, and this shall be stated explicitly in the certificate or certificates of attendance. This Course may be taken either in the Second or in the Third Year.
 (g.) Hospital Attendance.

Attendance during a *Winter* Session of Six Months, and a *Summer* Session of Three Months at a Medico-Chirurgical Hospital recognised by the University, and at the Clinical Lectures delivered therein.

THIRD YEAR.

No certificate of attendance at instruction in any of the branches of study assigned to the Third Year will be accepted, where such attendance appears to have taken place prior to the completion of the Second Year of Medical Studies, except as herein provided.

The Third Year's Course of Medical Studies consists of—

- | | |
|---|---|
| (a.) Anatomy, a Six Months' Advanced Systematic Course; | } If not attended during the Second Year. |
| (b.) Practical Anatomy (Dissections), a Six Months' Course; | |

The Course of Advanced Systematic Anatomy should be such as to enable Students to perfect their knowledge of the branches of Anatomy prescribed for the Second Examination in Medicine, and also of the whole nervous system and of the organs of sense.

- (c.) Physiology. A Six Months' Advanced Systematic Course.

The Course of Physiology must be distinct from the Course in the Second Year of Medical Studies. It shall deal expressly with those parts of the subject which are not prescribed for the Second Year's Course, and shall comprise Embryology, the Histology and Physiology of the central nervous system, and of the organs of special sense, of voice, and of reproduction.

- (d.) Practical Physiology and Histology (if not attended during the Second Year).

- (e.) Any *two* of the following:—

- (i.) Medicine, a Six Months' Course.
- (ii.) Surgery, a Six Months' Course.
- (iii.) Midwifery, and Diseases of Women and Children.

This may be attended either as one complete course, of at least six months, embracing both branches of the subject, or as two courses of three months each, one in Midwifery, the other in Diseases of Women and Children. These two courses must not be simultaneous.

- (f.) Materia Medica, Pharmacology and Therapeutics, a Three Months' Course (if not attended during the Second Year).

- (g.) Practical Pharmacy.^a

^a All candidates must lodge certificates of having attended this course in accordance with these regulations.

A Three Months' Course, with lectures on at least two days in the week, given in a recognised School in a properly equipped Laboratory by a duly appointed Lecturer on Pharmacy. (This Course may be attended before, at the same time as, or after that on *Materia Medica*, but must be attended in the Third Year).

(h.) Hospital Attendance.

Attendance during a *Winter* Session of Six Months, and a *Summer* Session of Three Months at a General Hospital recognised by the University and at the Clinical Lectures delivered therein.

Any of the following attendances may take place at any time during the Third, Fourth, or Fifth years:—

(i.) Fever Hospital.

Attendance during a period of three consecutive months at a Fever Hospital of repute, or in the Fever Wards of a General Hospital. If the attendance takes place during a regular Winter or Summer Session, it may be reckoned as a portion of the prescribed total Hospital attendance of thirty-three months.

But neither attendance at a Fever Hospital, nor the "Personal charge" of Fever cases, can be recognised, where it takes place prior to attendance at the course of Lectures on Theory and Practice of Medicine.

(j.) Attendance on at least six *Post-mortem* Examinations.

(k.) Attendance for at least three consecutive months in a General Hospital as Clinical Clerk, and three consecutive months as Dresser; such attendances not to be simultaneous.

FOURTH YEAR.

No certificate of attendance at instruction in any of the branches of study assigned to the Fourth Year will be accepted, where such attendance appears to have taken place prior to the completion of the Third Year of Medical Studies, except as herein provided.

The Fourth Year's Course comprises the following subjects at least:—

(a.) Such of the following as may not have been attended during the Third year of Medical Studies:—

(i.) Medicine, a Six Months' Course.

(ii.) Surgery, a Six Months' Course.

(iii.) Midwifery, and Diseases of Women and Children, a Six Months' Course.

(b.) Operative Surgery.

The course of instruction must be given in a recognised Medical School by a duly appointed Lecturer in Surgery. The Certificate of attendance must show that the Candidate has attended at least three-fourths of the whole period of the Course, such attendances not to be under any circumstances less than on twenty-four distinct days; and that the Candidate himself has, during such Course, performed at least four major operations on the dead subject under the direction of the Lecturer.

Printed Forms of this Certificate may be had on application.

(c.) Medical Jurisprudence, a Three Months' Course.

(d.) Pathology, a Three Months' Systematic Course of at least two lectures per week in a recognised Medical School.

Practical Pathology, a Three Months' Laboratory Course of at least three days per week in a recognised Medical School.

These Courses may be taken simultaneously.

(e.) Ophthalmology and Otology, a Three Months' Systematic Course in a recognised Medical School. This Course may be attended either before or at the same time as, but not after, the Hospital attendance in these subjects.

(f.) Hospital attendance.

Attendance during a *Winter* Session of Six Months and a *Summer* Session of Three Months at a General Hospital recognised by the University and at the Clinical Lectures delivered therein.

If not attended during the Third Year :—

(g.) Fever Hospital.

Attendance during a period of three consecutive months at a Fever Hospital of repute, or in the Fever Wards of a General Hospital.

(h.) Attendance on at least six *Post-mortem* Examinations.

(i.) Attendance for at least three months in a General Hospital as Clinical Clerk, and three months as Dresser; such attendances not to be simultaneous.

FOURTH AND FIFTH YEARS.

Attendance on the remaining parts of the Medical Curriculum may take place during either the Fourth or the Fifth Year. These parts are—

(a.) Sanitary Science.

A Three Months' Systematic Course in a recognised school. This Course shall include practical demonstration on Hygienic Apparatus and Models, and visits to Institutions and Buildings where Sanitary Appliances may be inspected.

The following are the particulars of this Course:—

An elementary knowledge of—

Air.—Composition of Air; Impurities in Air; Effects of Impurities.

Ventilation.—Amount of Fresh Air required; Cubic Space; Natural Ventilation; Artificial Ventilation; Sufficiency of Ventilation.

Water.—Examination of Water; its properties and composition; Impurities; Effects of Impurities; Water Supply; Purification of Water.

Food and Dieting.—General Principles of Diet; Diseases connected with Food; Quality, Choice and Cooking of Food.

Removal and Disposal of Sewage.

Habitations and Hospitals.—Construction, Warming, Lighting.

Soils and Sites.

Clothing and Exercise.

Disposal of the Dead.

Disinfection and Deodorisation.

Climate and Meteorology.

Causation and Prevention of Disease.

Duties of Medical Officers of Health.

The More Important Sanitary Acts.

The Elements of Statistics.

(b.) Mental Diseases.

A Three Months' Course in a recognised Institution where Clinical Instruction on Mental Diseases is given.

(c.) Practical Midwifery.

Attendance for a period of six months at a recognised Midwifery Hospital containing not less than fifteen beds in regular occupation where Clinical Instruction in Midwifery and Diseases of Women and Children is given, or for six months' at a Midwifery Dispensary, recognised by the Senate, where similar Clinical Instruction is given. During this period the Candidate is required to attend at least *twenty* Labours, of

ten of which at least he must have had personal charge.

- (d.) Ophthalmology and Otology. Attendance for a period of three months at a recognised Hospital, having at least ten beds devoted to diseases of the Eye and Ear.

If not already attended :—

- (e.) Fever Hospital.

Attendance during a period of three consecutive Months at a Fever Hospital of repute, or in the Fever Wards of a General Hospital.

- (f.) Attendance on at least six complete *Post-mortem* Examinations.

- (g.) Attendance for at least three months in a General Hospital as Clinical Clerk, and three months as Dresser ; such attendances not to be simultaneous.

- (h.) "Personal charge" of at least ten Fever cases.

Printed Forms of all Certificates of Personal Charge of Cases may be had on application.

N.B.—The expression *Personal Charge* implies that the student fulfils towards the case the duties commonly assigned to a Clinical Clerk.

Attendance in a Fever Hospital, or on Fever Cases, must not take place during the period of attendance on Practical Midwifery and Gynæcology.

- (i.) Vaccination.

A short course of practical instruction under a Public Vaccinator, including attendance on at least ten distinct days at a Dispensary when vaccination is being performed.

Printed Forms of this Certificate may be had on application.

FIFTH YEAR.

Hospital Attendance. Attendance during a *Winter* Session of Six Months at a recognised General Hospital, and at the Clinical Lectures delivered therein.

THE EXAMINATION FOR THE M.B., B.CH., B.A.O. DEGREES.

Candidates may present themselves for this Examination after an interval of such period, not being less than one Medical Year from the time of passing the Third Examination in Medicine, as the Senate may from time to time prescribe, provided they shall have completed the entire Medical Curriculum.

Printed forms of application for admission to this Examination may be had from "the Secretaries, the Royal University of Ireland, Dublin."

Each Candidate must send to the Secretaries, on or before April 5, for the Summer Examination, and September 1, for the Autumn Examination, a printed form of application for admission, accurately filled up and signed by the Candidate, together with the prescribed fee of £2.

This Examination consists of three parts:—

- (a.) Medicine, Theoretical and Clinical, including Therapeutics, Mental Diseases, Medical Jurisprudence, Sanitary Science, and Medical Pathology.
- (b.) Surgery, Theoretical, Clinical, and Operative, including the use of Instruments and appliances; Surgical Anatomy; Ophthalmology and Otology,^a Surgical Pathology.
- (c.) Midwifery and Diseases of Women and Children.

All Candidates must enter for and go through the entire Examination, but a Candidate may be adjudged to have passed in any of the foregoing parts in which he satisfies the Examiners.

Upon completing satisfactorily his Examination in all three divisions, the Candidate will receive, in addition to the parchment Diplomas recording his admission to the M.B., B.Ch., B.A.O. Degrees, a Certificate of having passed a Qualifying Examination in the subjects of Medicine, Surgery, and Midwifery.

The fee for this Certificate is *Ten Pounds*, which must be paid before admission to these Degrees.

DIPLOMA IN SANITARY SCIENCE.

This Diploma is conferred only on Graduates in Medicine of the University.

Candidates may present themselves for this Examination after an interval of twelve months from the time of obtaining the M.B., B.Ch., B.A.O. Degrees.

Printed forms of application for admission to this Examination may be had from "the Secretaries, the Royal University of Ireland, Dublin."

Each Candidate must send to the Secretaries on or before May 31 a printed form of application for admission, accurately filled up and signed by the Candidate, together with the prescribed fee of £2.

* Candidates at this Examination must exhibit reasonable proficiency in the use of the Ophthalmoscope and Laryngoscope.

On satisfying the Examiners the Candidate must pay a further fee of £3 before the Diploma can be granted to him.

Every Candidate must, when entering for the Examination, produce:—^a

- (a.) A Certificate of having, *after obtaining the M.B., B.Ch., B.A.O. Degrees*, attended during a period of six months Practical Instruction in a Laboratory approved by the University. The nature of this course is fully indicated by the detailed Syllabus of the Examinations in Physics, Climatology, Chemistry, Microscopy, Bacteriology, &c. An Institution applying to be recognised as fulfilling the conditions of the Regulations in regard to the course of Practical Instruction in a Laboratory, shall be required to include in the instruction given in such Institution the various subjects set forth in this Syllabus, and special application for recognition must be made.
- (b.) A Certificate of having, *after obtaining the M.B., B.Ch., B.A.O. Degrees*, for six months practically studied the duties of out-door Sanitary work under the Medical Officer of Health of a County or large Urban District.

The Subjects of this Examination are:—

Physics;
Climatology;
Chemistry;
Microscopy;
Bacteriology;
Geology;
Sanitary Engineering;
Hygiene, Sanitary Law, and Vital Statistics.

The Candidate must draw up reports on the Sanitary condition of Dwelling Houses, or other buildings selected for the purpose.

N.B.—Proficiency in practical work and an adequate acquaintance with the instruments and methods of research which may be employed for Hygienic investigations are indispensable conditions of passing the Examination.

DIPLOMA IN MENTAL DISEASES.

This Diploma is conferred only on Graduates in Medicine of the University.

Printed forms of application for admission to this Examination

^a These rules (a), (b), shall not apply to Medical Practitioners registered or entitled to be registered on or before Jan. 1, 1890.

may be had from "the Secretaries, the Royal University of Ireland, Dublin."

Each Candidate must send to the Secretaries, on or before Sept. 6, a printed form of application for admission, accurately filled up and signed by the Candidate, together with the prescribed fee of £2.

Each Candidate who satisfies the Examiners must pay a further fee of £3 before the diploma can be granted to him.

The subjects for this Examination are those prescribed for the Hutchinson Stewart Scholarship for proficiency in the treatment of Mental Disease.

BELFAST.

QUEEN'S COLLEGE.

Clinical instruction is given at the Belfast Royal Hospital. The Ulster Hospital for Diseases of Women and Children, the Belfast Maternity Hospital, the Belfast Ophthalmic Hospital, the Ulster Eye, Ear, and Throat Hospital, the Belfast District Lunatic Asylum, and the Belfast Hospital for Sick Children are open to students.

A pamphlet containing full information can be had free on application to the Registrar, Queen's College, Belfast, or from Dr. R. L. M'Kisack, Secretary, Medical Staff, Royal Hospital.

CORK.

QUEEN'S COLLEGE.

Clinical instruction is given at the North and South Infirmaries (each 100 beds). Students also can attend the Mercy Hospital (60 beds), the Cork Union Hospital, the County and City of Cork Lying-in-Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital, and the Eglinton Lunatic Asylum. The session at Queen's College extends from October to April inclusive (thirty weeks), but the hospitals are open to students in May, June, and July also, and arrangements have been made for the delivery of some of the three months' Courses of lectures during the months of April, May and June.

GALWAY.

QUEEN'S COLLEGE.

Clinical instruction is given at the Galway County Infirmary and the Galway Town Hospital.

Prizes.—Attached are eight scholarships of the value of £25 each. The Council may award Exhibitions to matriculated students at the examinations for junior scholarship. All scholarships and exhibitions of the second, third, and fourth years may be competed for by students who have attained the requisite standing in any medical school recognised by the College Council, and have passed the Matriculation Examination in the College, or in the Royal University of Ireland.

III.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, IRELAND.

OUTLINE MEDICAL COURSE APPLICABLE TO CANDIDATES FOR THE LICENCES OF THE ROYAL COLLEGES.

These Regulations apply to Candidates commencing Medical Study after 1st January, 1892.

1. Enter for and pass a Preliminary Examination recognised by the General Medical Council.

The Subjects are as follows:—

Fee, £2 2s. (Matriculated Pupils, R.C.S., £1 1s. See note, page 343.)	{	(a) ENGLISH LANGUAGE, including Grammar and Composition.
		(b) LATIN, including Grammar, Translation from specified authors, and Translation of easy passages not taken from such authors.
		(c) MATHEMATICS, comprising—(a) Arithmetic, (b) Algebra, including simple Equations, (c) Geometry, the subject matter of Euclid, Books, i. ii. and iii., with easy deductions.
		(d) ONE OF THE FOLLOWING OPTIONAL SUBJECTS: (a) Greek; (b) any Modern Language; (c) Logic.

And at once—

2. Register as a Medical Student on a form obtainable at the Royal College of Surgeons from the Registrar. No Fee.

3. Enter for and attend Courses for the First Professional Examination.	Winter six months	{	Dissections	... £5	5
			Chemistry	... 3	3
			Physics	... 3	3
	Summer three months	{	Practical Chemistry	5	5
			Pharmacy	... 3	3
			Biology	... 3	3

£23 2

4. Enter for and pass the First Professional Examination.

SUBJECTS OF EXAMINATION.

Fee, £15 15s. (Matriculated Pupils, R.C.S., £10 10s. See note, page 343).	{	1. (a) CHEMISTRY ; (b) PHYSICS.
		2. PRACTICAL PHARMACY.
		3. ELEMENTARY BIOLOGY.
		4. ANATOMY, viz.—Bones, with attachments of muscles and ligaments—Joints.

Candidates may take this Examination as a whole at one time, or in four parts, but no portion earlier than the end of the first Winter Session.

5. Enter for and attend Courses for the Second Professional Examination.	{	Winter six months	{	Hospital (9 months)	£12 12
			{	Anatomy	... 3 3
			{	Dissections	... 5 5
			{	Physiology	... 3 3
	{	Summer three months	{	Histology	... 5 5
			{	Materia Medica	... 3 3
					£32 11

Materia Medica may be deferred to the Third Year.

6. Enter for and pass the Second Professional Examination.

SUBJECTS OF EXAMINATION.

Fee, £10 10s.	{	1. ANATOMY.—The Anatomy of the whole Human Body.
		2. HISTOLOGY.
		3. HUMAN PHYSIOLOGY
		4. MATERIA MEDICA } if not deferred.

The Candidate must present himself, in the first instance at least, in Anatomy and Histology; if he pass in either of these subjects, he may, at the discretion of the Examiners, get credit therefor. Physiology and Materia Medica may, at the option of the Candidate, be passed at the end of the second or during the third year.

☞ The Lectures on Physiology must be attended before admission to any part of the Second Professional Examination.

7. Enter for and attend Courses for the Third Professional Examination.	} Winter six months	{	Hospital (18 months ^a)	£25	4
			Dissections	...	5 5
			Medicine	...	3 3
			Surgery	...	3 3
			Midwifery	...	3 3
	} Summer three months	{	Pathology	...	3 3
			Operative Surgery	...	5 5
			Public Health and Forensic Medicine	3	3
					£51	9

^a In addition to that attended in the Second Year, with evidence of attendance in Fever Wards.

8. Enter for and pass the Third Professional Examination.^a

SUBJECTS OF EXAMINATION.

Fee, £9 9s.	{	1. MEDICINE.
		2. SURGERY.
		3. PATHOLOGY.
		4. THERAPEUTICS.
		5. PUBLIC HEALTH AND FORENSIC MEDICINE.

A Candidate must present himself, in the first instance at least, in Medicine, Surgery (including Therapeutics), and Pathology. Should he pass in either Medicine or Surgery, he shall get credit therefor, even if he has failed in other parts of the Examination.

9. Enter for and attend Courses for the Final Examination.	{	Maternity Hospital, ^b £6 6s.,	
		£8 8s., or	... £10 10
		Ophthalmic Certificate	... 3 3
		Vaccination ^b	... 1 1
		Clinical Instruction in Mental Diseases ^b	... 3 3
			<hr/> £17 17

10. Enter for and pass the Final Examination.

SUBJECTS OF EXAMINATION.

Fee, £6 6s.	{	1. MEDICINE, including MEDICAL ANATOMY and MENTAL DISEASES.
		2. SURGERY.
		3. OPERATIVE SURGERY and SURGICAL ANATOMY.
		4. OPHTHALMIC and AURAL SURGERY.
		5. MIDWIFERY, including DISEASES OF WOMEN and NEW-BORN CHILDREN, and the THEORY and PRACTICE OF VACCINATION.

Every Candidate must produce evidence that he has acted as Medical Clinical Clerk for three months, and as Surgical Dresser for three months.

Candidates are not admissible to the Final Examination earlier than the end of the Fifth Year of Medical Study.

Candidates may enter for and pass separately in Medicine, Surgery, and Midwifery.

Colonial Candidates who have taken out a portion of the Course, or have passed Examinations in Australia and elsewhere, have been accorded certain exemptions, which may be learned on application to the Secretary of the Committee of Management.

^a This examination cannot be taken earlier than the end of the Fourth Winter Session.

^b May be taken in the Fourth Year.

MARKING.

(a) A numerical system of marks, ranging from 0 to 10, is now in use.

(b.) A uniform standard of 50 per cent. is the passing mark in all subjects, and in all examinations.

(c.) In deciding as to whether a candidate has passed in any subject or not, the marks in all the divisions of the subject—written, oral, and practical—are considered together; provided, however, that bad answering in the clinical portion shall not be compensated for by excellence in the other portions of the subject.

EXEMPTIONS.

The analogous Examinations of the various Medical Licensing Bodies are, as a rule, accepted by the Conjoint Board as equivalent to the First, Second, and Third Professional Examinations; but credit will not, save in special cases, be given for separate subjects in which the Candidate has passed elsewhere.

The Entrance Examinations of the Universities, Intermediate Examinations, and Examinations of the College of Preceptors, or other Examinations in General Education recognised by the General Medical Council, are accepted in lieu of the Preliminary Examinations of the Colleges.

Lists of the Examinations which have been already accepted, and the value attached to them, are given in the Conjoint Regulations.

Candidates are referred for detailed information to the Official Regulations published by the Colleges.

MATRICULATION AS PUPIL OF THE ROYAL COLLEGE OF SURGEONS.

All persons proceeding to the study of Medicine may, if approved by the Council, become matriculated pupils of the College on payment of five guineas, and having done so, will enjoy the following privileges:—

1. They will, if matriculated before the preliminary examination, be admitted on payment of £1 1s. (half fee).

2. They will be permitted to study in the Library and Museums of the College.

3. Their fee for the First Professional Examination will be reduced by £5 5s.

We are indebted to *The Lancet*, August 21, 1897, for the following Table, which we have revised and corrected in some minor points:—

Tabular List of the Classes, Lecturers, and Fees at the

LECTURES, &c.	DUBLIN UNIVERSITY	DUBLIN. R. C. OF SURGEONS		DUBLIN. CATHOLIC UNIVERSITY
	Lecturers	Lecturers	Fees	Lecturers
Histology and Physiology	..	Prof. Scott	Course, £3 3s., in all Classes, ex. Descri. Anat. (£5 5s.), Oper. Surg. (£5 5s.), Pract. Chem. (£5 5s.), Pract. Histology (£5 5s.)	Dr. Coppinger and Dr. Coffey † Dr. Birmingham
Anatomy, Descriptive and Surgical	Dr. Cunningham	Prof. Fraser		
Practical Anatomy and Dissections	Dr. Cunningham	Prof. Fraser		Dr. Birmingham,† assisted by Drs. Fagan and Dempsey
Chemistry - - -	Dr. Reynolds	} Profs. Sir C. Cameron and Lapper		{ Dr. Campbell, assisted by Dr. Frengley
Practical Chemistry	Dr. Reynolds			
Materia Medica and Pharmacy	Dr. W. G. Smith	Prof. Sir G. F. Duffey		Dr. Quinlan*
Botany and Zoology -	Dr. Wright Prof. Mackintosh	Profs. Minchin and Cosgrave §		Dr. Sigerson † and Dr. Blaney
Institutes of Medicine and Pathology	Dr. Purser	..		Dr. McWeeney
Natural Philosophy -	Prof. FitzGerald	..		Prof. Stewart †
Hospital Practice -	Sir P. Dun's or other Dublin Hospital	The various Dublin Hospitals		The various Dublin Hospitals
Clinical Lectures -	..	..		..
Surgery - - -	Dr. E. H. Bennett	} Profs. Sir W. Stokes and W. Stoker		Mr. P. J. Hayes and Mr. McArdle
Operative Surgery -	..			
Midwifery, &c. - -	Dr. A. V. Macan	Prof. S. R. Mason		Dr. A. J. Smith
Medicine - - -	Dr. Finny	Prof. J. W. Moore		Sir C. J. Nixon
Medical Jurisprudence -	Dr. Bewley	Prof. Auchinleck		Mr. Roche
Comparative Anatomy -	Prof. Mackintosh	..		Dr. Sigerson and Dr. Blaney †
Practical Pharmacy -	Dr. W. G. Smith	Prof. Sir G. F. Duffey		Dr. Quinlan
Logic - - -	The College Tutors	..		..
Physics - - -	..	Prof. Lapper		[Medical Registrar: Dr. Birmingham] Prof. Stewart †
Pathology - - -	Mr. O'Sullivan	..		Dr. McWeeney
Ophthalmology and Otolaryngology	..	Profs. Jacob, Fitzgerald, and Story		Dr. Werner
Hygiene - - -	Dr. Bewley	Sir Charles Cameron		Mr. Roche

* In Summer.

† In Winter and in Summer

Medical Schools of Ireland for the Session 1897-98:

BELFAST QUEEN'S COLLEGE		CORK QUEEN'S COLLEGE		GALWAY QUEEN'S COLLEGE	
Lecturers	Fees	Lecturers	Fees	Lecturers	Fees
	First Course		First Course		First Course
	£ s.		£ s.		£ s.
Dr. W. H. Thompson	3 0	Dr. J. J. Charles	3 0	Dr. Pye	3 0
Dr. J. Symington	2 0		..	Dr. Pye	2 0
Dr. Symington and Demonstrators	3 0	Dr. Charles and Demonstrators	3 0	Dr. Pye and Demonstrators.	3 0
Dr. Letts	2 0	Dr. Augustus E. Dixon	2 0	Dr. Senier	2 0
Dr. Letts†	3 0	Dr. Augustus E. Dixon	3 0	Dr. Senier	3 0
Dr. W. Whitla	2 0	Dr. C. Y. Pearson	2 0	Dr. Colahan	2 0
Dr. R. O. Cunningham†	2 0	Professor Hartog	2 0 each	Dr. R. J. Anderson	2 0
..	..	..	..	Dr. Lynham	2 0
Prof. W. B. Morton	2 0	Mr. William Bergin	2 0	Professor Anderson	2 0
Belfast Royal and other Hospitals	..	North and South Infirmarys	..	Galway Hospital, Galway Union Hospital, and Galway Fever Hospital	Sess. 5 0
..	..	..	..	Drs. Kinkead, Pye, Brereton, Colahan, and Lynham	..
Dr. Sinclair	2 0	Dr. S. O'Sullivan	2 0	Dr. W. Brereton	2 0
Dr. Sinclair*	2 0	Dr. S. O'Sullivan	2 0	..	..
Dr. J. W. Byers	2 0	Dr. Corby	2 0	Dr. Kinkead	2 0
Dr. Cuming	2 0	..	2 0	Dr. Lynham	2 0
Dr. Hodges	2 0	Dr. C. Yelverton Pearson	2 0	Dr. Senier } Dr. Kinkead }	2 0
..	..	..	..	[Modern Languages: Professor Steinberger]	..
Dr. V. G. L. Fielden	2 0	Dr. C. Yelverton Pearson	..	..	2 0
Professor J. Park	2 0	Professor Stokes	1 0	Sir T. W. Moffett	2 0
..
Dr. J. Lorrain Smith	2 0	Dr. Cotter	2 0	Dr. Lynham	2 0
Dr. W. A. M'Keown	2 0	Dr. Sandford	..	..	..
Dr. E. A. Letts and Dr. Henry Whitaker	2 0	Dr. Donovan	..	..	..

† Zoology in Winter; Botany in Summer.

§ Including Biology.

DATES OF CONJOINT EXAMINATIONS.

Preliminary	-	-	-	March and September.
Professional	-	-	-	April, July, and October.

Fees for Courses of Study payable in the Dublin Schools and Hospitals for the Conjoint Examinations of the Royal Colleges of Physicians and Surgeons, Ireland:—

			£	s.
Three Courses Demonstrations and Dissections at £5 5s.			15	15
One Course Anatomical Lectures	-	-	-	3 3
„ „ Lectures on Physiology	-	-	-	3 3
„ „ Surgery	-	-	-	3 3
„ „ Theoretical Chemistry	-	-	-	3 3
„ „ Materia Medica	-	-	-	3 3
„ „ Practice of Medicine	-	-	-	3 3
„ „ Midwifery	-	-	-	3 3
„ „ Pathology	-	-	-	3 3
„ „ Physics	-	-	-	3 3
„ „ Practical Histology	-	-	-	5 5
„ „ Operative Surgery	-	-	-	5 5
„ „ Practical Chemistry	-	-	-	5 5
„ „ Public Health and Forensic Medicine	-	-	-	3 3
„ „ Practical Pharmacy	-	-	-	3 3
„ „ Biology	-	-	-	3 3
				<hr/>
Total Fees for Lectures	-	-	-	£69 6
				<hr/>
Fees for 27 months' Medico-Chirurgical Hospital attendance			37	16
Six months' Midwifery Hospital	£6 6s.,	£8 8s., or	10	10
Three months' Ophthalmic Hospital	-	-	-	3 3
Three months' Mental Diseases	-	-	-	3 3
Vaccination	-	-	-	1 1
				<hr/>
Total	-	-	-	£124 19

EXAMINATION FEES.

			For L. & L.M., R.C.P.I., and L. and L.M., R.C.S.I.
First Professional Examination	-	-	£15 15 0
Second Professional Examination	-	-	10 10 0
Third Professional Examination	-	-	9 9 0
Final Professional Examination	-	-	6 6 0
			<hr/>
Total	-	-	£42 0 0

REGULATIONS FOR CANDIDATES FOR THE CONJOINT
DIPLOMA IN STATE MEDICINE.

The following regulations are compulsory on all Candidates beginning the study of Sanitary Science after January 1st, 1894 ; the date of commencement of study being fixed by the date of the certificates.

Stated Examinations for the Diploma in State Medicine commence on the first Tuesday of the months of February, May, and November, and occupy four days.

A special Examination for the Diploma can be obtained—except in the months of August and September—on payment of £5 5s., in addition to the ordinary Fees mentioned below, and on giving notice at least one fortnight before the date of the proposed Examination.

Every Candidate for the Diploma in State Medicine must be a Registered Medical Practitioner. He must return his name to the Secretary of the Committee of Management under the Conjoint Scheme, Royal College of Physicians, Dublin, three weeks before the Examination, and lodge with him a Testimonial of Character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh, together with certificates of study as hereinafter set forth.

Candidates registered as Medical Practitioners or entitled to be so registered after 1st January, 1890, must comply with the following Resolutions passed by the General Medical Council on December 1st, 1893, in regard to Diplomas in State Medicine:—

“(a) This Council, having regard to the terms of Section 18 of the Local Government Act, 1888, and observing that under that section special privilege is to be accorded to the holders of the Diplomas granted under Section 21 of the Medical Act (1886), and therein described as Diplomas in Sanitary Science, Public Health, or State Medicine, thinks it essential to declare, with regard to its own future action under Section 21 of the Medical Act (1886), that it will not consider Diplomas to ‘deserve recognition in the *Medical Register*’ unless they have been granted under such conditions of education and examination as to insure (in the judgment of the Council) the possession of a distinctively high proficiency, scientific and practical, in all the branches of study which concern the Public Health ; and that the Council, in forming its judgment on the conditions of education and examination, will expect the following rules to have been observed:—

“(b) A period of not less than twelve months shall elapse between the attainment of a first registrable qualification in Medi-

cine, Surgery, and Midwifery, and the admission of the Candidate to any examination, or any part thereof, for a Diploma in Sanitary Science, Public Health, or State Medicine.

“(c) Every Candidate shall have produced evidence of having, after obtaining a registrable qualification, attended during six months’ practical instruction in a Laboratory or Laboratories, British or Foreign, approved by the Body granting the Diploma, in which Chemistry, Bacteriology, and the Pathology of the Diseases of Animals transmissible to Man are taught.

“(d) Every Candidate shall have produced evidence that, during a period of six months after obtaining a registrable Qualification, he has either practically studied the duties of outdoor sanitary work, under the Medical Officer of Health of a County or large Urban District, or else has himself held an appointment as Medical Officer of Health under conditions not requiring the possession of a Special Sanitary Diploma. The Certificate of an Assistant Officer of Health of a County or a large Urban District may be accepted, provided the Medical Officer of Health of the County or District consents to the Assistant Officer giving such instruction.

“(e.) Every Candidate shall have produced evidence that he has attended the Clinical Practice of a Hospital for Infectious Diseases recognised by one of the Licensing Bodies; provided that such a course of instruction may have been taken as part of the Curriculum, for his registrable Qualification in Medicine, Surgery, and Midwifery.

“(f) The Examination shall have been conducted by Examiners specially qualified; it shall have extended over not less than four days, one of which shall have been devoted to practical work in a Laboratory, and one to practical examination in, and reporting on, subjects which fall within the special outdoor duties of a Medical Officer of Health.”

* * * The *Rules* as to study shall not apply to—

“(a) Medical Practitioners registered, or entitled to be registered, on or before January 1, 1890:

“(β) Registered Medical Practitioners who have for a period of three years held the position of Medical Officer of Health of any County, or to any Urban District of more than 20,000 inhabitants, or to any entire Rural Sanitary District.”

These *Rules* shall apply to all Diplomas granted after January 1, 1894, provided that the *Rules* passed by the Council on June 1, 1889, and November 25th, 1890, shall continue to apply

to Candidates who had commenced special study in Sanitary Science prior to January 1, 1894.

* * * The Executive Committee [of the General Medical Council] has power, in special cases, to admit exceptions to the Rules for the Registration of Diplomas in Sanitary Science, and report the same to the General Council.

The Fee for the Examination is Ten Guineas, which must be lodged in the Ulster Bank, Dublin, to the credit of the Committee of Management, at least two weeks before the date fixed for the Examination. Fees are not returned to any Candidate who withdraws from, or is rejected at, any Examination. The Fee for re-examination is Five Guineas.

The Examination for the Diploma in State Medicine comprises the following subjects:—State Medicine and Hygiene, Chemistry, Meteorology, and Climatology, Engineering, Morbid Anatomy, Vital Statistics, Medical Jurisprudence, Law.

IV.

APOTHECARIES' HALL IN IRELAND.

The First, Second, and Third Professional Examinations are held four times a year—viz., commencing the third Monday in January, April, July, and October.

The final Examinations are held in January and July.

The Fees payable for each Examination are as follows:—

First Professional	-	-	£5	5	0
Second „	-	-	5	5	0
Third „	-	-	5	5	0
Final Examination	-	-	6	6	0

Fees are not returned to any Candidate who withdraws from, or is rejected at, any Examination. If a Candidate gives three clear days' notice of inability to attend, he may present himself at the remaining Examination without any further fee.

A Candidate is allowed for each Professional Examination which he has completed at any other Licensing Body, except the Final. If he has passed only in some of the subjects in a given Examination, he has to pay the whole of the fee for that Examination. The fees for re-examination are

For each subject	-	-	£1	1	0
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excepting in the subjects of Chemistry, Pharmacy, Surgery, and Medicine, the fees for which are £2 2s. each.

The fee for Final alone	-	-	£15	15	0
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When the other Examinations have been taken elsewhere.

Ladies who comply with the regulations will be admitted to these examinations.

Candidates may be admitted to a Special Examination, under special circumstances, which must be laid before the Examination Committee. If the Candidate's application be granted, an extra fee of Ten Guineas over and above the full fee is required.

Candidates already on the Register will receive the Diploma of the Hall, on passing an Examination in the subjects which are not covered by their previous qualifications, and on paying a fee of Ten Guineas. If Medicine or Surgery is required, Two Guineas extra will be charged. "

All examination Fees are to be lodged in the Sackville-street Branch of the Royal Bank of Ireland, to the credit of the Examination Committee. Applications and Schedules, together with Bank Receipt for the fee, must be lodged with the Registrar, Apothecaries' Hall, 40 Mary-street, Dublin, fourteen clear days before the first day of Examination.

COURSE OF STUDY FOR THE DIPLOMA.

Candidates who desire to obtain the Letters Testimonial of the Apothecaries' Hall in Ireland must, before proceeding to the Final Examination, produce evidence of having been registered as a Medical Student for 57 months; also of having attended Courses of Instruction as follows:—

Winter Courses of Six Months.

One Course each of the following:—

Anatomy (Lecture).

Chemistry—Theoretical.

Midwifery.

Practice of Medicine.

Physiology, or Institutes of Medicine.

Surgery.

Dissections, two courses of six months each.

Courses of Three Months.

One Course of each of the following:—

Materia Medica.

Medical Jurisprudence.

Chemistry—Practical.

Practical Physiology and Histology.

Operative Surgery.

Physics.

Clinical Ophthalmology.

Biology.

Clinical Instruction in Mental Disease.

Pathology.

Vaccination.

Medico-Chirurgical Hospital, twenty-seven months, to be distributed at the Student's own discretion over the last four years of his study. The Candidate may substitute for nine months in this Hospital Attendance six months as a Resident Pupil. He will be required to present a certificate of having taken notes of at least six Medical and six Surgical cases recorded under the supervision, respectively, of a Physician and Surgeon of his Hospital.

Three months' study of Fever—which may be included in his twenty-seven months' Hospital Attendance—in a Hospital containing Fever Wards, and having taken notes of five cases of Fever—viz., either Typhus, Typhoid, Scarlet Fever, Small-pox or Measles.

Six months' Practical Midwifery and Diseases of Women during the Winter or Summer of the third or the fourth year, at a recognised Lying-in Hospital, or Maternity.

Three months' Practical Pharmacy, in a recognised Clinical Hospital or a recognised School of Pharmacy, or a year in the Compounding Department of a Licentiate Apothecary or a Pharmaceutical Chemist.

Each Candidate, before receiving his Diploma, must produce evidence that he has attained the age of twenty-one years.

EXAMINATIONS FOR THE DIPLOMA.

All information relative to the Examinations may be obtained from the Registrar of the Apothecaries' Hall, 40 Mary-street, Dublin, who will receive the applications of Candidates, and with whom the Bank receipt for lodgment of fees, together with all certificates, must be lodged at least fourteen days prior to the day fixed for the commencement of the Examination for the class to which each Candidate belongs.

DENTAL EDUCATION AND EXAMINATIONS IN IRELAND.*

The Royal College of Surgeons in Ireland grants Diplomas in Dental Surgery under conditions of which the following is a synopsis:—

* Fuller particulars can be obtained by application to the Registrar, Royal College of Surgeons, St. Stephen's-green, Dublin.

The Candidate must be twenty-one years of age.

The Candidate must have passed three Examinations.

1. Preliminary (identical with the Medical Preliminary).
2. Primary Dental. Fee, £10 10s. (This Examination is much the same as the Second Conjoint Professional.)
3. Final Dental Examination. Fee, £10 10s. Candidates are examined in Dental Surgery and Pathology, and in Mechanical Dentistry and Practical Metallurgy.

Candidates are required to do gold fillings, and construct mechanical work in the presence of the Examiners.

The Certificate required may be divided into General and Special.

1. The General Certificates required are about the same as those required by the Medical Student for the Second Conjoint Professional Examination.

The Special Certificates may be subdivided into—

1. Dental Hospital. 2. Practical Mechanical Dentistry.
1. Dental Hospital. Two years' attendance, with Lectures in Dental Surgery and Pathology and in Mechanical Dentistry and Orthodonty. Fee, £28 7s.
2. Practical Mechanical Dentistry. Three years' instruction from a Registered Dentist. The fee for this is variable, but may be set down at from £50 to £150.

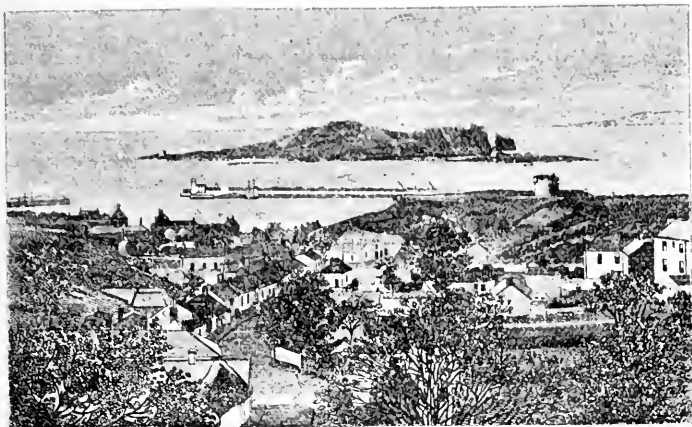
Large reductions in the Special Certificates required are made in the cases of qualified Medical Practitioners.

GALACTOGOGUES.

DR. GRINEWITCH has been making a study of the drugs which increase the flow of milk without in any way injuring the quality of it. He finds that the most efficient of them is a plant which is practically unknown in medicine—the common goat's rue (*Galega officinalis*). He gives a drachm of the tincture about five times a day. The next drug in the scale is the common stinging nettle, of which he gives from two hundred and fifty to five hundred drops of the tincture daily.—*Med. Rec.*

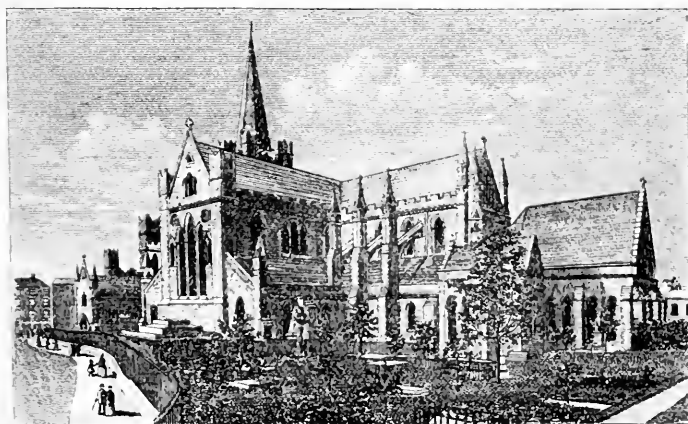
NEW YORK POST-GRADUATE SCHOOL.

FROM the Supplementary Number of the New York *Post-Graduate* we learn that the School, now in its fourteenth year, is doing excellent work—4,379 students have matriculated, and 550 attended the courses in the past year. It teaches clinically and by demonstrations; there are no “lectures.” The fees for all the courses and clinics of School and Hospital (with certain specified exceptions, which are “extras”), are £30 for twelve weeks; £20 for six.



HOWTH AND IRELAND'S LYE

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 PURE
TABLE WATERS
 AT ALL
HOTELS & RESTAURANTS



ST. PATRICK'S CATHEDRAL



PURVEYORS TO H.R.H

THE PRINCE OF WALES

CANTRELL & COCHRANE'S,

32 Gold and Prize Medal

Table Waters.



BOTTLED UNDER PRESSURE AT THE WELL OF ST PATRICK
St Patricks Well Lane, Nassau Place, Dublin, Ireland



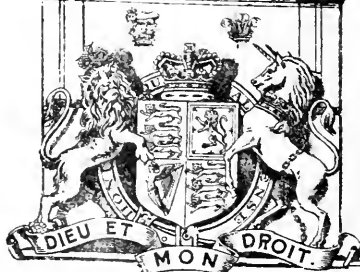
Uisce Slan

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WATER OF HEALTH

HYGEIA

GODDESS OF HEALTH.



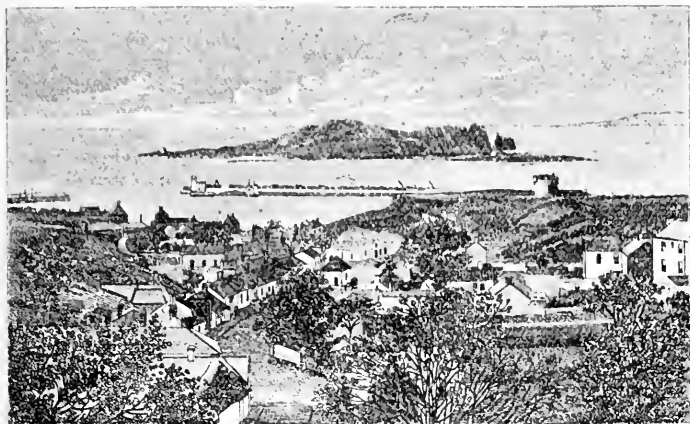
"SIR CHARLES CAMERON SAYS, "CLUB SODA" NEUTRALIZES THE LACTIC ACID IN THE BLOOD WHICH GIVES RISE TO RHEUMATISM & OTHER AFFECTIONS IT IS AN ANTIDOTE TO ACID DYSPEPSIA, AND PROMOTES DIGESTION AND IS THE MOST WHOLESOME DAILY BEVERAGE THAT CAN BE TAKEN"



FAC-SIMILE OF SHAPE OF BOTTLE LABEL

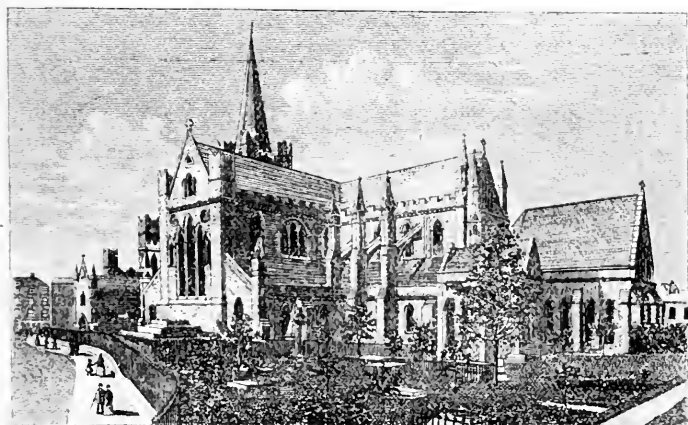
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THE PRINCE OF WALES

CANTRELL & COCHRANE'S.

32 Gold and Prize Medal Table Waters.

BOTTLED UNDER PRESSURE AT THE WELL OF ST PATRICK
St Patricks Well Lane, Nassau Place, Dublin Ireland



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USK A - SLAN

WATER OF HEALTH

HYGEIA
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"SIR CHARLES CAMERON SAYS. "CLUB SODA"
NEUTRALIZES THE LACTIC ACID IN THE BLOOD
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TIONS IT IS AN ANTIDOTE TO ACID DYSPEPSIA, AND
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CANTRELL & COCHRANE'S
SUPER
CARBONATED
"CLUB SODA"
(SPECIALLY PREPARED)
32 GOLD
& Prize Medals awarded
Works: DUBLIN & BELFAST.

MANUFACTURED IN IRELAND BY H.M. ROYAL LETTERS PATENT

FAC-SIMILE OF SHAPE OF BOTTLE LABEL

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IRELAND

MEDICAL AID ASSOCIATIONS.

TO THE EDITOR OF THE DUBLIN MEDICAL JOURNAL.

SIR,—At a recent meeting of the Great Yarmouth District Committee of the Incorporated Medical Practitioners' Association it was decided to send a memorial to every licensing body in the United Kingdom, calling attention to the evils and abuses at present existing in connection with the administration of many Clubs and Medical Aid Societies, and if possible to procure an expression of opinion from the licensing bodies on the conduct of those of their graduates or diplomates who, by holding appointments under such clubs or societies, aid, abet, and perpetuate the abuses and evils which exist in connection therewith.

I herewith enclose a copy of the memorial which is now in the hands of the Secretaries of each of the twenty licensing bodies, and which will be brought before their next meeting of Senate or Council.

We feel convinced that only by repeated and extended agitation will the General Medical Council be induced to legislate in anything like accordance with the views expressed in this memorial; and we now ask you, Sir (together with the editors of other influential professional organs), to afford us your valuable assistance by publishing in your next issue this letter and memorial, and thus bringing the matter before the profession, and especially to the cognisance of Societies akin to our own, and so leading to their co-operation and possibly to the adoption by them of measures calculated to bring forcibly to the notice of the licensing and governing bodies the abuses now obtaining in connection with Medical Aid Societies, Clubs, and Hospitals.

I am, Sir,

Your obedient servant,

W. E. WYLLYS, *Hon. Sec.*,

Gt. Yarmouth District Committee, I.M.P.A.

Great Yarmouth,

10th September, 1897.

MEMORIAL.

TO THE SENATE [COUNCIL] OF THE ———

WE, the undersigned—being, with one exception, all the registered medical men engaged in private practice in Great

Yarmouth—beg leave to bring the following facts under the notice of your Senate [Council], as the governing body of one of the corporations entitled under the Medical Acts to grant degrees, [diplomas], qualifying their holders to practise Medicine, Surgery, and Midwifery in the United Kingdom:—

1. In Great Yarmouth, as in other districts of the United Kingdom, certain grave abuses have grown up of late years in connection with the systems of “Medical Aid” for the working classes organised by the Friendly Societies and by certain Industrial Life Assurance Companies, and other lay associations.

The principal abuses referred to are—

- (a.) The admission of persons not needing such assistance to medical benefits intended primarily for the relief of the poorer classes.
- (b.) The admission of women and children to these benefits at entirely inadequate rates of payment for the medical officer.
- (c.) Specially in the case of Industrial Assurance and similar Societies a system of indiscriminate canvassing whereby the private patients of other medical men are solicited—directly for the Company—indirectly for its medical officer.
- (d.) The conduct of medical practice by lay organisations purely as a commercial speculation, this being most flagrant where, as in some cases, the medical officer receives a fixed salary; and beyond this amount the fees accruing from his work are appropriated as the profits of his non-medical employers.

2. For the purpose of checking these and similar abuses all but one of the medical practitioners residing in Great Yarmouth combined, and as one result of their Association a joint request was made to the Friendly Societies for a conference with a view to an amicable adjustment of the matters in question, but with few exceptions the Friendly Societies absolutely refused this request, dismissed their Medical Officers, and proceeded to form a Medical Institute in the constitution of which all the above abuses are maintained and even increased.

3. The posts of Medical Officers to this Institute were advertised in the lay press, and as a result, notwithstanding the condemnation of such methods of practice by the Medical Journals, and by the general voice of the profession, and in spite also of the fact that those accepting these appointments must knowingly,

wilfully, and openly assume the position of assisting a certain section of the public to defeat the local medical men in a matter involving the vital interests of the profession, qualified medical men were, we regret to say, found willing to take these posts.

4. One of our members had previously acted as the Medical Officer of an Industrial Assurance Company offering "Medical Aid" as an attraction to its insurers, paying its Medical Officer a fixed salary, and canvassing for patients from door to door. This office he has resigned, but in the absence of any declaration as to these appointments by the General Medical Council, or by the Universities and Colleges granting medical qualifications, the Company has, we believe, easily found a substitute.

5. Such facts as we have recited can be quite paralleled in the experience of other towns and districts of the United Kingdom, and appear to us to call for the careful attention of the various governing bodies entrusted with the granting of medical qualifications and with the control of those qualified.

That dignity and independence which are essential to the adequate discharge by medical men of their duties to the public are gravely imperilled by these abuses. In particular (*a*) canvassing by lay bodies on behalf of medical men employed by them is plainly contrary to the first principles underlying proper professional relations, and appointments depending on such canvassing ought not to be permitted to be held by registered medical practitioners; (*b*) it is impossible for a medical man, acting under the control and direction, and entirely subservient to the pecuniary interests of a purely trading company which traffics in medical attendance, to satisfactorily perform the duties of a medical practitioner; whilst (*c*) the unchecked extension of the club system to all classes of society threatens a general conversion of medical practice from the basis of private relation to that of public contract, a conversion which we think the medical profession should resist with all its strength, not more in its own interest than in that of the public.

We, therefore, beg leave to submit the following questions to the consideration of your Senate [Council]:—

- (*a*) Is the holding of appointments such as are herein described compatible with the conditions under which your degree [diploma] is granted and held?
- (*b*) If the holding of such appointments by your graduates [diplomates] does not contravene the existing regulations, does not your Senate [Council] consider that, in the

interests of the medical profession and of the public, by-laws forbidding such practice should be adopted?

- (c) Is not your Senate [Council] of opinion that for a medical man to hold such appointments should be declared by the General Medical Council to be conduct infamous in a professional respect, and if so, will your Senate [Council] instruct its representative on the General Medical Council to support such a declaration?

(Signed)

Henry Blake, M.B. Lond.

Thomas Lettis, M.R.C.S. Eng. ; L.S.A. Lond.

A. C. Mayo, M.R.C.S. and L.S.A. Lond.

A. H. Meadows, M.R.C.S. Eng. ; L.R.C.P. Lond.

Thos. Hy. Moxon, M.R.C.S. Eng., L.S.A.

Alban H. Moxon, M.R.C.S., L.S.A.

Charles O'Farrell, L.R.C.P., L.R.C.S., Edin.

James Ryley, M.D. Lond. ; M.R.C.S. Eng.

Raymond H. Shaw, M.S., M.B., Durham.

John Benj. Nicholson Vickers, L.R.C.P. Lond., M.R.C.S.E.

J. Smith Whitaker, M.R.C.S. Eng., L.R.C.P. Lond.

R. Wrigley, M.R.C.S. Eng., L.S.A.

W. E. Wyllys, L.R.C.P., L.R.C.S. Edin.

Wm. Wyllys, M.R.C.S.E., L.R.C.P., L.S.A. Lond.

Leonard Youatt, M.B., Ch.B., D.P.H. Vict.

PROFESSIONAL SECRECY.

WE find the following curious case in the *Gazette Médicale de Paris* :—"Dr. C. having given professional attendance to a young lady, who had been put under his care by M. D., and being unable to extract his fees from M. D., wrote to Madame D. informing her of the circumstances, and urging her to pay his bill if she wished to avoid the publicity of legal proceedings. She took no notice, and the doctor sued for 420 francs. The court decided that he should get his fees, which, however, it reduced to 300 francs. But M. D. sued the doctor for 5,000 francs, damages for 'breach of professional secrecy and serious failure in the duty of a physician,' and recovered the 300 francs which he had just been condemned to pay. Costs were equally divided between the parties."

SANITARY AND METEOROLOGICAL NOTES.

Compiled by J. W. MOORE, B.A., M.D., Univ. Dubl. ;
F.R.C.P.I. ; F. R. Met. Soc. ;
Diplomate in State Medicine and ex-Sch. Trin. Coll. Dubl.

VITAL STATISTICS

For four weeks ending Saturday, September 11, 1897.

The deaths registered in each of the four weeks in the twenty-three principal Town Districts of Ireland, alphabetically arranged, corresponded to the following annual rates per 1,000 :—

Towns	Weeks ending				Towns	Weeks ending			
	Aug. 21	Aug. 28	Sept. 4	Sept. 11		Aug. 21	Aug. 28	Sept. 4	Sept. 11
Armagh -	7.0	14.0	35.1	35.1	Lisburn -	17.0	8.5	8.5	17.0
Ballymena	5.6	16.9	11.3	28.2	Londonderry	37.7	28.3	29.8	25.1
Belfast -	31.5	28.5	23.9	28.0	Lurgan -	22.8	4.6	9.1	13.7
Carrickfergus	23.4	35.1	0.0	5.8	Newry -	12.1	8.1	24.1	20.1
Clonmel -	19.5	19.5	14.6	24.4	Newtownards	11.3	11.3	11.3	22.7
Cork -	17.3	27.7	24.9	24.9	Portadown	12.4	18.6	0.0	49.5
Drogheda -	7.6	11.4	15.2	22.8	Queenstown	11.5	17.2	28.7	11.5
Dublin -	23.9	22.2	22.5	21.8	Sligo -	20.3	10.2	5.1	20.3
Dundalk -	37.7	16.8	16.8	12.6	Tralee -	5.6	11.2	16.8	22.4
Galway -	52.9	41.5	22.7	18.9	Waterford	33.8	25.9	31.8	25.9
Kilkenny -	14.2	4.7	14.2	33.0	Wexford -	22.6	36.1	27.1	22.6
Limerick -	12.6	15.4	19.6	14.0					

In the week ending Saturday, August 21, 1897, the mortality in thirty-three large English towns, including London (in which the rate was 24.2), was equal to an average annual death-rate of 28.7 per 1,000 persons living. The average rate for eight principal towns of Scotland was 21.6 per 1,000. In Glasgow the rate was 23.3. In Edinburgh it was 17.1.

The average annual death-rate represented by the deaths registered

during the week in the twenty-three principal town districts of Ireland was 24·9 per 1,000 of their aggregate population, which, for the purposes of this return, is estimated at 984,720.

The deaths from the principal zymotic diseases in the twenty-three districts were equal to an annual rate of 6·3 per 1,000, the rates varying from 0·0 in twelve of the districts to 12·6 in Londonderry—the 24 deaths from all causes registered in that district comprising 8 from diarrhoea. Among the 170 deaths from all causes registered in Belfast are 1 from measles, 3 from whooping-cough, 9 from enteric fever, and 44 from diarrhoea. The 25 deaths in Cork comprise one from each of the following—whooping-cough, diphtheria, and diarrhoea. Of the 17 deaths in Waterford 6 were from diarrhoea. Two of the 3 deaths in Newry were from measles. The 9 deaths in Dundalk comprise 2 from diarrhoea.

In the Dublin Registration District the registered births amounted to 230—124 boys and 106 girls; and the registered deaths to 163—89 males and 74 females.

The deaths, which are 8 over the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 24·3 in every 1,000 of the population. Omitting the deaths (numbering 3) of persons admitted into public institutions from localities outside the district, the rate was 23·9 per 1,000. During the first thirty-three weeks of the current year the death-rate averaged 31·6, and was 4·1 over the mean rate in the corresponding period of the ten years 1887-1896.

The number of deaths from zymotic diseases registered was 43, being 14 in excess of the average for the corresponding week of the last ten years, but 10 under the number for the previous week. They comprise 1 from measles, 3 from scarlet fever (scarlatina), 1 from influenza, 2 from whooping-cough, 1 from mumps, 2 from enteric fever, 1 from simple cholera, and 31 from diarrhoea (against an average of 15 for the corresponding week of the last ten years). Of the 31 fatal cases of diarrhoea 28 were children under 5 years of age.

The number of cases of scarlatina admitted to hospital was 23, being 3 under the admissions for the preceding week. Twenty-one scarlatina patients were discharged, 2 died, and 104 remained under treatment on Saturday, being equal to the number in hospital on that day week. There were in addition 21 convalescents under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork-street Fever Hospital.

Ten cases of enteric fever were admitted to hospital, as against 11 in each of the two weeks preceding. Fifteen patients were discharged, 3 died, and 53 remained under treatment on Saturday, being 8 under the number in hospital at the close of the preceding week.

The weekly number of cases of measles admitted to hospital, which had fallen from 27 in the week ended August 7 to 16 in the following week, further declined to 4. Eleven patients were discharged, and 46 remained under treatment on Saturday, being 7 under the number in hospital on that day week.

One case of typhus was admitted to hospital, and 2 cases remained under treatment in hospital on Saturday.

The number of deaths from diseases of the respiratory system registered was 15, being 1 over the average for the corresponding week of the last ten years, but 2 under the number for the previous week. The 15 deaths comprise 11 from bronchitis and 3 from pneumonia.

In the week ending Saturday, August 28, the mortality in thirty-three large English towns, including London (in which the rate was 20·4), was equal to an average annual death-rate of 24·6 per 1,000 persons living. The average rate for eight principal towns of Scotland was 19·6 per 1,000. In Glasgow the rate was 19·7, and in Edinburgh it was 17·4.

The average annual death-rate in the twenty-three principal town districts of Ireland was 23·5 per 1,000 of their aggregate population.

The deaths from the principal zymotic diseases in the twenty-three districts were equal to an annual rate of 5·6 per 1,000, the rates varying from 0·0 in twelve of the districts to 8·3 in Belfast—the 154 deaths from all causes registered in that district comprising 8 from whooping-cough, 1 from diphtheria, 6 from enteric fever, and 30 from diarrhoea. Among the 40 deaths from all causes registered in Cork are 1 from whooping-cough, 1 from enteric fever, and 6 from diarrhoea. The 18 deaths in Londonderry comprise 4 from diarrhoea. Of the 13 deaths in Waterford 4 were from diarrhoea. The 2 deaths in Newry consist of 1 from measles and 1 from diarrhoea.

In the Dublin Registration District the registered births amounted to 166—79 boys and 87 girls; and the registered deaths to 154—80 males and 74 females.

The deaths, which are 5 under the average number for the cor-

responding week of the last ten years, represent an annual rate of mortality of 23·0 in every 1,000 of the population. Omitting the deaths (numbering 5) of persons admitted into public institutions from localities outside the district, the rate was 22·2 per 1,000. During the first thirty-four weeks of the current year the death-rate averaged 31·3 and was 3·9 over the mean rate in the corresponding period of the ten years 1887-1896.

Forty-six deaths from zymotic diseases were registered, being 20 in excess of the average for the corresponding week of the last ten years, and 3 over the number for the previous week. The 46 deaths comprise 2 from scarlet fever (scarlatina), 1 from influenza, 2 from diphtheria, 3 from enteric fever, 3 from simple cholera, 31 from diarrhœa (against an average of 14 in the corresponding week of the last ten years), and 1 from dysentery. Of the 31 deaths from diarrhœa, 28 were children under 5 years of age.

The weekly number of cases of scarlatina admitted to hospital, which had fallen to 23 in the previous week, further declined to 13. Fifteen scarlatina patients were discharged, 1 died, and 101 remained under treatment on Saturday, being 3 under the number in hospital at the close of the preceding week. This number is exclusive of 22 convalescents at Beneavin, Glasnevin.

The number of cases of enteric fever admitted to hospital was 10, being equal to the admissions in the preceding week. Eight patients were discharged, 1 died, and 54 remained under treatment on Saturday, being 1 over the number in hospital on that day week.

Only 3 cases of measles were admitted to hospital, being 1 below the admissions in the preceding week. Sixteen patients were discharged, and 33 remained under treatment on Saturday, being 13 under the number in hospital on that day week.

The number of deaths from diseases of the respiratory system registered was 13, being 5 below the average for the corresponding week of the last ten years, and 2 under the number for the previous week. The 13 deaths comprise 9 from bronchitis, 2 from pneumonia, and 1 from pleurisy.

In the week ending Saturday, September 4, the mortality in thirty-three large English towns, including London (in which the rate was 17·0), was equal to an average annual death-rate of 20·7 per 1,000 persons living. The average rate for eight principal towns

of Scotland was 18·1 per 1,000. In Glasgow the rate was 18·0, and in Edinburgh it was 15·1.

The average annual death-rate represented by the deaths registered in the twenty-three principal town districts of Ireland was 22·2 per 1,000 of the population.

The deaths from the principal zymotic diseases in the twenty-three districts were equal to an annual rate of 4·9 per 1,000, the rates varying from 0·0 in fifteen of the districts to 11·0 in Londonderry—the 19 deaths from all causes registered in that district comprising 7 from diarrhoea. Among the 129 deaths from all causes registered in Belfast are 1 from measles, 2 from whooping-cough, 1 from simple continued fever, 9 from enteric fever, and 30 from diarrhoea. The 36 deaths in Cork comprise 2 from whooping-cough, 1 from enteric fever, and 1 from diarrhoea. The 16 deaths in Waterford comprise 3 from diarrhoea.

In the Dublin Registration District the registered births amounted to 225—120 boys and 105 girls, and the registered deaths to 155—68 males and 87 females.

The deaths, which are 11 under the average number for the corresponding week of the last ten years, represent an annual rate of mortality of 23·1 in every 1,000 of the population. Omitting the deaths (numbering 4) of persons admitted into public institutions from localities outside the district, the rate was 22·5 per 1,000. During the first thirty-five weeks of the current year the death-rate averaged 31·1, and was 3·8 over the mean rate in the corresponding period of the ten years 1887-1896.

The number of deaths from zymotic diseases registered was 36, being 2 in excess of the average for the corresponding week of the last ten years, but 10 under the number for the previous week. The 36 deaths comprise 1 from scarlet fever (scarlatina), 3 from whooping-cough, 4 from diphtheria, 1 from infantile cholera, 1 from choleraic diarrhoea, and 25 from diarrhoea (against an average of 18 for the corresponding week of the last ten years). Of the 25 deaths from diarrhoea, 23 were of children under 5 years of age.

Nineteen cases of scarlatina were admitted to hospital, being 6 over the admissions in the preceding week, but 4 under the number admitted in the week ended August 21. Seventeen scarlatina patients were discharged, 1 died, and 102 remained under treatment on Saturday, being 1 over the number in hospital on that day week. This number does not include 21 convalescents under treatment at Beneavin, Glasnevin.

Fourteen cases of enteric fever were admitted to hospital, against 10 in each of the two weeks preceding. Fourteen patients were discharged, and 54 remained under treatment on Saturday, being equal to the number in hospital at the close of the preceding week.

Only 3 cases of measles were admitted to hospital; 19 patients were discharged, and 17 remained under treatment on Saturday, being 16 under the number in hospital on that day week.

No case of typhus remained under treatment in hospital at the close of the week.

The number of deaths from diseases of the respiratory system registered is 10, being 7 below the average for the corresponding week of the last ten years, and 3 under the number for the previous week. The 10 deaths consist of 6 from bronchitis, 2 from pneumonia, 1 from laryngitis, and 1 from croup.

In the week ending Saturday, September 11, the mortality in thirty-three large English towns, including London (in which the rate was 16·4), was equal to an average annual death-rate of 19·4 per 1,000 persons living. The average rate for eight principal towns of Scotland was 18·3 per 1,000. In Glasgow the rate was 19·0, and in Edinburgh it was 19·9.

The average annual death-rate in the twenty-three principal town districts of Ireland was 23·7 per 1,000 of the population.

The deaths from the principal zymotic diseases in the twenty-three districts were equal to an annual rate of 4·7 per 1,000, the rates varying from 0·0 in fourteen of the districts to 21·0 in Armagh—the 5 deaths from all causes registered in that district comprising 1 from each of the following—whooping-cough, enteric fever and diarrhoea. Among the 151 deaths from all causes registered in Belfast are 1 from scarlatina, 6 from whooping-cough, 4 from simple continued fever, 4 from enteric fever, and 26 from diarrhoea. The 36 deaths in Cork comprise 2 from whooping-cough, 1 from diphtheria, 1 from enteric fever, and 1 from diarrhoea. Of the 16 deaths in Londonderry 4 were from diarrhoea. Four of the 13 deaths in Waterford were from the same disease. The 8 deaths in Portadown comprise 2 from measles.

In the Dublin Registration District the registered births amounted to 168—91 boys and 77 girls; and the registered deaths to 150—81 males and 69 females.

The deaths, which are 6 under the average number for the corresponding week of the last ten years, represent an annual rate of

mortality of 22·4 in every 1,000 of the population. Omitting the deaths (numbering 4) of persons admitted into public institutions from localities outside the district, the rate was 21·8 per 1,000. During the first thirty-six weeks of the current year the death-rate averaged 30·9, and was 3·7 over the mean rate in the corresponding period of the ten years 1887-1896.

The number of deaths from zymotic diseases registered was 32, being 2 in excess of the average for the corresponding week of the last ten years, but 4 under the number for the previous week. The 32 deaths comprise 2 from scarlet fever (scarlatina), 3 from whooping-cough, 3 from diphtheria, 4 from enteric fever, 1 from simple cholera, 15 from diarrhœa (being equal to the average for the corresponding week of the last ten years), 1 from dysentery, and 1 from erysipelas. The 15 deaths from diarrhœa were all of children under 5 years of age.

Twenty-five cases of scarlatina were admitted to hospital, being 6 over the number admitted in the preceding week. Nineteen scarlatina patients were discharged, 2 died, and 106 remained under treatment on Saturday, being 4 over the number in hospital on that day week. This number is exclusive of 23 convalescents at Beneavin, Glasnevin.

Twenty cases of enteric fever were admitted to hospital, being 6 in excess of the number admitted in the previous week. Seven patients were discharged, 6 died, and 61 remained under treatment on Saturday, being 7 over the number in hospital at the close of the preceding week.

Only 15 cases of measles remained under treatment in hospital on Saturday, and no cases were received.

Twenty deaths from diseases of the respiratory system were registered, being 10 over the number for the previous week, and 4 over the average for the thirty-sixth week of the last ten years. They comprise 9 from bronchitis and 8 from pneumonia.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20' N., Long. 6° 15' W., for the Month of August, 1897.

Mean Height of Barometer, -	-	-	29·708 inches.
Maximal Height of Barometer (on 2nd, 9 p.m.),			30·205 „
Minimal Height of Barometer (on 21st, 5 p.m.),			29·246 „
Mean Dry-bulb Temperature,	-	-	59·2°.
Mean Wet-bulb Temperature,	-	-	56·2°.
Mean Dew-point Temperature,	-	-	53·6°.
Mean Elastic Force (Tension) of Aqueous Vapour,			·411 inch.
Mean Humidity, -	-	-	82·2 per cent.
Highest Temperature in Shade (on 4th),	-		76·8°.
Lowest Temperature in Shade (on 19th),	-		49·2°.
Lowest Temperature on Grass (Radiation) (on 19th and 27th),	-	-	45·4°.
Mean Amount of Cloud,	-	-	55·4 per cent.
Rainfall (on 24 days),	-	-	3·788 inches.
Greatest Daily Rainfall (on 7th),	-	-	·901 inch.
General Directions of Wind,	-	-	S., S.W., W.

Remarks.

A changeable, showery, windy month, but tolerably warm. In fact great heat prevailed during the first week, which was in all respects summerlike. During the rainy period which followed, temperature did not fall low owing to the prevalence of southerly and south-westerly winds. Thunder and lightning occurred frequently in Great Britain, to a far less extent in Ireland. The wind was often high and squally.

In Dublin the arithmetical mean temperature (60·8°) was decidedly above the average (59·7°); the mean dry bulb readings at 9 a.m. and 9 p.m. were 59·2°. In the thirty-two years ending with 1896, August was coldest in 1881 (M. T. = 57·0°), and warmest in 1893 (M. T. = 63·0°). In 1895 the M. T. was 60·0°; in 1879 (the “cold year”) it was 57·7°; in 1896 it was 58·3°.

The mean height of the barometer was 29·708 inches, or 0·189 inch below the corrected average value for August—namely, 29·897 inches. The mercury marked 30·205 inches at 9 p.m. of the 2nd, and fell to 29·246 inches at 5 p.m. of the 21st. The observed range of atmospheric pressure was, therefore, ·959 inch.

The mean temperature deduced from daily readings of the dry bulb thermometer at 9 a.m. and 9 p.m. was 59·2°, or 1·7° above the value in August, 1896. It was 1·1° below the value for July,

1897. Using the formula, *Mean Temp.* = *Min.* + (*max.*—*min.* × .47), the mean temperature was 60·4°, or 1·1° above the average mean temperature for August, calculated in the same way, in the twenty-five years, 1865–89, inclusive (59·3°). The arithmetical mean of the maximal and minimal readings was 60·8°, compared with a twenty-five years' average of 59·7°. On the 4th the thermometer in the screen rose to 76·8°—wind, S.S.E.; on the 19th the temperature fell to 49·2°—wind, W. The minimum on the grass was 45·4°, on the 19th and 27th.

The rainfall was 3·788 inches, distributed over 24 days. The average rainfall for August in the twenty-five years, 1865–89, inclusive, was 2·825 inches, and the average number of rainy days was 15·5. The rainfall, therefore, and the rainy days were considerably in excess of the average. In 1874 the rainfall in August was very large—4·946 inches on 18 days; and in 1868, also, 4·745 inches fell on, however, only 13 days; but the heaviest downpour in August occurred in 1889, when 5·747 inches were registered on 22 days. On the other hand, in 1884, only .777 inch was measured on 8 days. In 1896, 1·136 inches fell on 18 days.

High winds were noted on as many as 16 days, and attained the force of a gale on three occasions in Dublin—the 17th, 26th, and 30th. Thunder occurred on the 14th, thunder and lightning on the 18th. Temperature reached 70° in the screen on 5 days—all in the first week. The morning of the 1st was foggy.

The most noteworthy feature in the weather of the week ended Saturday, the 7th, was the intensity of the heat which prevailed in most parts of western Europe—particularly in England and France. As is usual, this culminated in violent thunderstorms on Wednesday and Thursday. On both of these days the thermometer touched 90° in the shade at Cambridge—the London maxima were 88° and 87° respectively. Until Wednesday all parts of the British Islands were under the full influence of an anticyclone, or system of high atmospheric pressure. While of no great intensity, this anticyclone had much staying power, and as the winds were light and the sky comparatively free of cloud, the sun's heat had full sway and the thermometer rose higher and higher each day. On Wednesday a decided fall of the barometer occurred in the west, as a large area of low pressure moved in over Ireland from the Atlantic. The fall of the barometer went on gradually until Friday morning, when readings as low as 29·45 inches were reported from the N. and N.W. of Ireland. The wind now veered into W. from S. and a gradual but decided reduction of temperature took

place, Saturday proving a cool, cloudy, rather showery day. In Dublin the mean height of the barometer was 29·909 inches, the range being from 30·205 inches at 9 p.m. of Monday (wind, E.N.E.), to 29·541 inches at 9 a.m. of Friday (wind, S.W.). The corrected mean temperature was 64·3°. The mean dry bulb reading at 9 a.m. and 9 p.m. was 63·2°. On Sunday the screened thermometers fell to 53·5°, on Wednesday they rose to 76·8° (the highest reading recorded this season in Dublin). The rainfall was ·911 inch, on two days, ·901 inch being measured on Saturday. Of this large amount, ·890 inch fell in a rainstorm on the morning of Sunday, August 8. The prevalent wind was S.E.

Very changeable, rainy or showery weather held during the week ended Saturday, the 14th, the rainfall being particularly heavy and frequent at the Irish and Scotch stations. In the east and south-east of England spells of fine, dry weather were enjoyed. On Sunday morning an oval-shaped depression had its centre over St. George's Channel, whence it stretched northwestwards to Connaught and southeastwards to the S.W. of England and the English Channel. From this position the system travelled eastward across England, causing very heavy rains in many places. Monday was very fine, but on Tuesday morning a new disturbance lay off the S.W. of Ireland, whence it travelled northeastwards and caused another downpour of rain in Ireland, Wales, the N. of England and Scotland. Thunderstorms broke out on Wednesday in Great Britain generally. On Friday and Saturday an area of low pressure was found off the N.W. of Ireland and W. of Scotland. This system kept the weather in a showery, squally condition to the close of the week. In Dublin the mean atmospheric pressure was 29·811 inches, the barometer falling to 29·546 inches at 9 a.m. of Sunday (wind, N.E.), and rising to 30·013 inches at 9 a.m. of Thursday (wind, W.). The corrected mean temperature was 60·3°, or 4·0° below that of the previous week. The mean dry bulb reading at 9 a.m. and 9 p.m. was 59·4°. On Monday the screened thermometers rose to 68·6°, on Thursday they sank to 51·9°. The rainfall amounted to ·837 inch on six days, ·420 inch being measured on Tuesday. The prevalent winds were S.S.W. and N.W. Thunder was heard on Saturday afternoon, when thunder, lightning, and hail were observed in the County Kildare.

Very changeable, rainy weather prevailed throughout the week ended Saturday, the 21st. A succession of primary barometric depressions of considerable size and depth passed across the N.W. of Ireland and of Scotland, while their subsidiary or secondary disturbances travelled across the more southern and central portions

of the United Kingdom. Strong S.W. to N.W. winds and frequent showers, accompanied by thunder and lightning from time to time, were the result. Temperature was also most unsteady, Wednesday night being particularly cold, while Tuesday and Friday were tolerably warm days. In the S.E. of England intervals of fine, dry, and fairly warm weather were enjoyed, but in Ireland, Wales, the greater part of England and Scotland rain fell heavily almost daily. In Dublin two showers on Wednesday yielded nearly half an inch of rain in the gauge ($\cdot480$ inch); of these showers the second was attended with thunder and lightning. On Tuesday the wind rose to the force of a fresh gale from W.S.W. in the forenoon, but it moderated after 2 p.m., and a fine evening followed. In Dublin the mean height of the barometer was 29.584 inches, the range being from 29.838 inches at 9 a.m. of Monday (wind, W.) to 29.246 inches at 5 p.m. of Saturday (wind, W.S.W.). The corrected mean temperature was 59.1° . The mean dry bulb reading at 9 a.m. and 9 p.m. was 58.0° . On Thursday the screened thermometers fell to 49.2° ; on Friday they rose to 68.4° . Rain fell daily to the total amount of 1.247 inches, $\cdot480$ inch being measured on Wednesday, when thunder and lightning occurred. Westerly winds (between S.S.W. and N.W.) prevailed.

During the week ended Saturday, the 28th, the weather remained changeable as in past weeks, squally and showery with a preponderance of south-westerly winds. In a word, it was of a cyclonic type. The scene of the heaviest rainfall was, however, shifted from Ireland and Scotland to England, and after Tuesday to the S. and S.E. of the last-named country. During Sunday a fresh breeze blew from W.N.W., and the weather, although cloudy, was chiefly fine and dry. On Monday a new depression advanced over Ireland from the westward, throwing the weather again into an unsettled, showery condition. By Tuesday morning the centre of this disturbance had reached St. George's Channel. It subsequently passed across England in an east-north-easterly direction, causing thunderstorms and heavy rains in that country. In Ireland, after a dull, rainy morning, the weather became bright, with a light breeze from N.E. and later from N. Wednesday was cloudy to fair in Dublin, but the weather remained thundery and showery in the S. and S.E. of England. At night a brisk fall of the barometer heralded the approach of a new depression to the Irish coasts. This system caused a short summer-gale and driving rain on Thursday morning, but the afternoon was fair and sunny. A subsidiary depression formed at this time over England and spread eastwards, so that heavy rains accompanied by thunder were again experienced very generally in Great Britain. Breezy, showery

weather lasted to the close of the week. In Dublin the mean atmospheric pressure was 29·624 inches, the barometer falling to 29·414 inches at 1 p.m. of Thursday (wind, S.E. to S.), and rising to 29·788 inches at 9 p.m. of Saturday (wind, S.W.). The corrected mean temperature was 58·9°. The mean dry bulb reading at 9 a.m. and 9 p.m. was 57·2°. On Sunday the minimum was 50·9°, on Thursday the maximum was 68·7° in the shade. Rain fell on six days to the amount of ·301 inch, ·141 inch being measured on Monday. At Greystones 1·125 inches of rain fell during this week. Southerly and south-westerly winds prevailed.

The last three days were changeable like the greater part of the month. On Sunday, the 29th, a deep depression, in which the barometer fell almost to 29 inches, passed northwards across Ireland. It caused fresh southerly gales and heavy rains, and was followed by showers and squalls alternating with fine, bright intervals to the close of the month.

The rainfall in Dublin during the eight months ending August 31st amounted to 19·388 inches on 149 days, compared with 14·464 inches on 120 days in 1896, 9·455 inches on 96 days during the same period in 1887, and a twenty-five years' average of 17·558 inches on 128·1 days.

At Knockdolian, Greystones, Co. Wicklow, the rainfall in August was 6·195 inches on 27 days, compared with 1·245 inches on 14 days in 1896, and 4·735 inches distributed over 24 days in 1895. Of this quantity ·850 inch fell on the 7th. The total fall since January 1 amounts to 25·945 inches on 143 days, compared with 14·327 inches on 91 days in 1896, 22·685 inches on 107 days in 1895, 25·206 inches on 131 days in 1894, 16·341 inches on 106 days in 1893, and 21·296 inches on 108 days in 1892.

At the National Hospital, Newcastle, Co. Wicklow, the rainfall in August was 4·526 inches on 20 days, ·807 inch being measured on the 29th and ·728 inch on the 7th.

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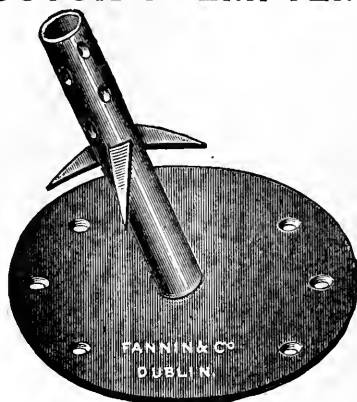
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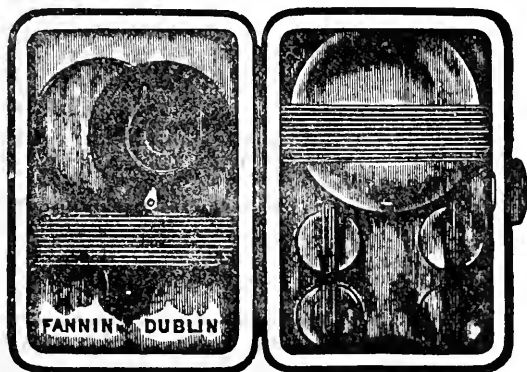
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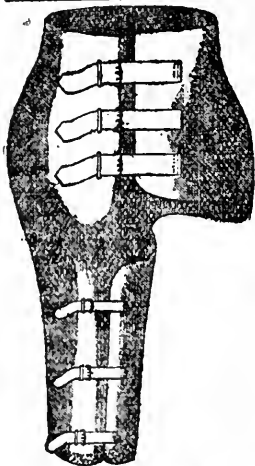
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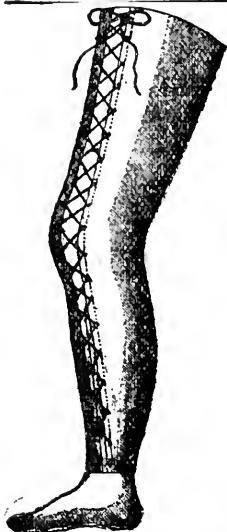


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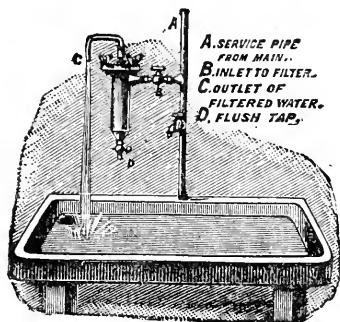
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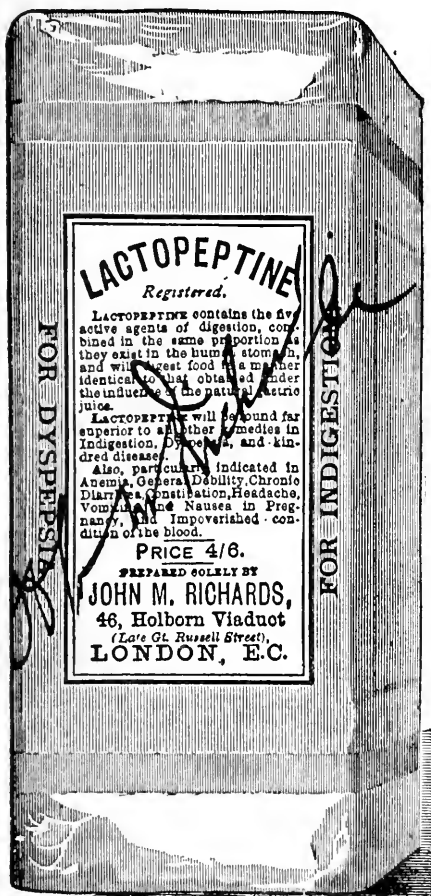
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